COUNTY BOROUGH OF NORTHAMPTON.

REPORT

OF THE

MEDICAL OFFICER OF HEALTH

FOR THE YEAR 1931.

By STEPHEN ROWLAND, M.D.Edin., D.P.H.Camb.,
Medical Officer of Health,
School Medical Officer, and
Chief Tuberculosis Officer.

TABLE OF CONTENTS.

APPENDICES.

To the Mayor, Aldermen, and Councillors of the County Borough of Northampton.

Mr. Mayor, Ladies, and Gentlemen,

I present herewith the Annual Report of the Medical Officer of Health for the year 1931, which for statistical purposes embraces a period of fifty-two weeks ending on 2nd January, 1932. The statistical year is fixed by the Registrar-General to ensure uniformity throughout the country.

The report is on the same lines as its predecessors, but, not being a five-yearly survey report, is not quite so full as the one issued last year.

No new matter of any outstanding interest has been introduced.

There were two small outbreaks of smallpox during the year, which we were able to eradicate before they had the opportunity of spreading.

It is satisfactory to be able to report a marked falling off in the incidence of diphtheria in the Town during 1931, a fall which continues up to the present moment.

I again acknowledge the wholehearted assistance and support I have received from all members of my Staff during the year, a support which has enabled the work in the Department to be carried on without any friction and, as I hope, to the satisfaction and welfare of all concerned.

I remain, Mr. Mayor, Ladies, and Gentlemen,

Your obedient Servant,

Stephen Rowland

Medical Officer of Health.

Public Health Department,
Guildhall, Northampton,
April, 1932.

PUBLIC HEALTH STAFF.

Medical Officer of Health, School Medical Officer, and Chief Tuberculosis Officer	STEPHEN ROWLAND, M.D. Edin., D.P.H. Camb.
Tuberculosis Officer	..NORMAN B. LAUGHTON, M.B., Ch.B., D.P.H.
Assistant Medical Officer for Maternity and Child Welfare	MISS EVELYN F. BEBBINGTON, M.B., Ch.B., D.P.H., M.R.C.S., L.R.C.P.
Chief Sanitary Inspector and Rat Officer	..W. J. BARKER*†
Sanitary Inspector and Inspector of Common Lodging Houses	J. WALKER*†
Meat and Food Inspector	..J. BROWN*†
Sanitary Inspector and Inspector of Canal Boats	B. KNOWLES*†
Assistant Sanitary Inspectors ..	..T. L. BOAST*† S. A. TENCH*
Health Visitors	..MISS L. M. ISLIP‡‖ MISS M. E. MOSSEY‡‖§ MRS. F. H. SMITH‡‖§ MISS F. M. V. BLYTHE BROWN‡‖ MISS E. C. AGAR‡‖¶
Tuberculosis Nurse	..MISS L. REESE ‖
Matrons	..MISS M. E. NORMAN‖§ (*Harborough Road Infectious Diseases Hospital*) MISS K. B. STONE‖§ (*Welford Road Tuberculosis Hospital*)
Clerks	..A. F. KNIGHT (*Chief Clerk*) S. J. KNIGHT (*Tuberculosis Dispensary*) H. T. BOSWELL MISS G. L. YORK (*Infant Welfare Centre*) G. B. PRATT
Removal and Disinfecting Staff ..	..C. H. WILLIAMS A. W. BLASON R. G. A. BRITTEN
Rat-catcher	..J. MALONE

All the above are whole-time Officers. School Medical Staff is not included.

*Holds Inspector's Certificate of the Royal Sanitary Institute.
†Holds Certificate for Inspecting Meat and Other Foods.
‡Holds Certificate of the Central Midwives Board.
‖General Trained Nurse.
§Fever Trained Nurse.
¶Holds Health Visitor's Certificate.

SUMMARY OF STATISTICS.

Area of Borough (in acres)	3,469
Population :—	
Census 1921	90,895
Census 1931 (provisional figure)	92,314
Estimated at Mid-year 1931 — For Birth-rate	92,970
Estimated at Mid-year 1931 — For Death-rate	92,740
Number of Inhabited Houses :—	
Census 1921	19,893
According to Rate Books (31st December, 1931)	23,950
Number of Families or Separate Occupiers (Census 1921)	21,979
Rateable Value (31st December, 1931)	£608,126
Yield of One Penny Rate (31st December, 1931)	£2,402

Extracts from Vital Statistics for the Year 1931.

		TOTAL.	M.	F.		
Live Births	Legitimate	1,171	607	564	Birth-rate	13·3
	Illegitimate	62	28	34		
	Total	1,233	635	598		
Stillbirths	Legitimate	39	17	22	Rate	0·46*
	Illegitimate	4	2	2		
	Total	43	19	24		
Deaths		1,091	540	551	Death-rate	11·8

"Standardised Death-rate" (Factor 0·921)	10·8
Percentage of Total Deaths occurring in Public Institutions	38·0
Number of Women dying in, or in consequence of, Childbirth — From Sepsis	4
Number of Women dying in, or in consequence of, Childbirth — From Other Causes	1

Deaths of Infants under One Year of Age per 1,000 Live Births :—
Legitimate..69·2 Illegitimate..96·8 Total ..... 70·6

	NUMBER.	RATE.
"Zymotic Deaths"	22	0·24
Deaths from Measles (all ages)	9	0·10
Deaths from Whooping Cough (all ages)	2	0·02
Deaths from Diarrhœa (under two years of age)	7	†
Deaths from Respiratory Tuberculosis	70	0·75
Deaths from Other Tuberculous Diseases	14	0·15
Total Tuberculosis Deaths	84	0·90
Deaths from Cancer	148	1·60
Deaths from Influenza	23	0·25

*33·7 per 1,000 Total (Live and Stillbirths) Births Registered.
†5·7 per 1,000 Live Births Registered.

I.—STATISTICS AND SOCIAL CONDITIONS.

Population

It was mentioned in the Annual Report for 1930 that the Registrar-General intended making his estimate of the 1930 mid-year population after receiving the provisional figure for the census taken in April, 1931, but to obviate delay in publishing the report, as the 1930 figure was not available, use was made of the 1929 estimates. It was also mentioned (or hinted) that these figures might be inaccurate, which would necessitate some slight adjustment of the rates deduced from them. This supposition has proved to be correct, for it appears that for some years the Registrar-General has been over-estimating the population of Northampton, for whereas at mid-year 1929 he gave the figure for birth-rate calculations as 94,180 and for death-rate purposes 93,970, in 1930 he said they were 93,460 and 93,300. These figures were reduced in the 1931 estimate (after the census) to 92,970 and 92,740 respectively. The effect of the over-estimation of the population on the birth and death-rates was to make them both slightly lower than they were in actual fact.

The natural increase of the population, *i.e.*, the excess of births over deaths, for 1931 was 142, or 1·5 per thousand living. Table 1 (page 78) gives the estimated population and natural increase during each of the last ten years.

Census

The fourteenth census of the population of England and Wales was taken on 26th April, 1931. The provisional figure for the County Borough of Northampton is 92,314. In his Preliminary Report, the Registrar-General states—"This information has been obtained in advance of the main statistical operations by so organising the procedure of enumeration as to permit of the simple figures being abstracted locally and summaries rapidly compiled by local registrars for assembly at the Census Office. The figures so prepared are subject to confirmation in the substantive census reports based upon the actual census returns themselves, though no material discrepancy is to be expected, judging by past experience."

The figures for the Borough since the first census was taken in 1801 make interesting reading :—

1801	7,020
1811	8,427
1821	10,793
1831	15,349
1841	21,242
1851	26,657
1861	32,813
1871	41,168
1881	51,881
1891	61,012
1901	87,021

1911	90,064
1921	90,895
1931 (provisional)	92,314

Information as to the age and sex constitution and marital state of the local population in 1931, the population of the twelve wards and the density per acre as well as the rooms available per person, the number of inhabited dwellings shewing those occupied by more than one family, and other useful information, *e.g.*, occupations, usually contained in the census volume, is not yet available, but, unfortunately, some of it will be rendered of less value owing to the extension of the Borough and the alterations in wards as from 1st April, 1932.

Births

1,233 live births were registered, giving a birth-rate of 13·3 per thousand, compared with 15·8 for England and Wales. For once one is able to say the birth-rate was not the lowest ever recorded for the Borough. The continued fall in the birth-rate, which has now been in progress in this country for over half a century, has for some time been giving rise to feelings of disquietude amongst many social workers and statisticians and lately these feelings have been freely mentioned in the press, as it becomes more and more evident the population of Great Britian is reaching a stationary point when no increase will take place, to be followed by the inevitable decrease. With the increased knowledge put at the disposal of practically all and sundry, it is only to be expected the birth-rate in England and Wales will continue to fall. Not only will the population tend to decline after a few years, but its age constitution will alter. Table 2 (page 78) gives the rates for the last ten years, compared with those for the country.

Sixty-two (5·0 per cent.) of the births in 1931 were illegitimate, this being the highest number for ten years and the percentage is the highest since the war years.

Stillbirths

There were forty-three stillbirths registered, giving a rate of 0·46 per thousand of the population, as compared with 0·67 for England and Wales. The rate expressed per thousand total births (live and still) registered was 33·7.

Deaths

There were 1,091 deaths registered, equal to a death-rate of 11·8, which is 0·3 above that for 1930, and compares with 12·3 for England and Wales. The figures for the last ten years will be found in Table 3 (page 78).

Ninety-five deaths occurred for which no medical certificates of the causes of death were furnished ; these included ninety-three inquests and two coroner's certificates after post-mortem examinations without inquests, or 8·7 per cent. of the nett deaths registered.

Deaths of elderly persons (sixty-five years of age and upwards) accounted for 48·2 per cent. of the deaths. This latter figure does not vary much from year to year.

472 persons, including residents and non-residents, died in local institutions. The deaths of non-residents were transferred by the Registrar-General to their respective areas. In a similar way the deaths of Northampton residents which took place in other parts of England and Wales were transferred to us as "inward transfers."

The "standardised death-rate" for Northampton (obtained by applying the Registrar-General's factor for age and sex constitution to the crude rate) was 10·8 per thousand.

Table C at the end of this report, giving the causes of death at different periods of life, has been prepared in the Public Health Department from information supplied weekly by the local registrars. The classification agrees closely with the figures received from the Registrar-General on 11th March, 1932.

Social Conditions

The social conditions in the Borough vary little from year to year. The staple industry, boot and shoe making, has remained in a fairly satisfactory state. The other trades have been similarly employed, but there is great need of some new industry in the Town to absorb a proportion of those unemployed who will probably never again work at the shoe trade. At least we must be thankful Northampton has not known the unemployment and poverty which have rested for years like a pall over the industrial areas of the north.

Unemployment

From information kindly supplied by the Manager of the Employment Bureau, there appears to have been a considerable increase in the amount of unemployment in Northampton during 1931 and this increase has been in progress during practically the whole of the twelve months. On 28th July, 1930, there were on the register 4,002 unemployed persons, which by the corresponding date in 1931 had become 5,824, and by the end of December, 1931, approximately 8,000, about 6,000 of whom were totally unemployed. The year under consideration was the worst of any during the present industrial depression and this increase in unemployment affected males more than females.

The Borough Engineer has again kindly furnished information relating to public works undertaken with the object of alleviating to some degree the amount of unemployment :—

	Average number of unemployed engaged.
1.—Terracing playing fields at rear of Northampton School for Girls and Technical College, St. George's Avenue. (16th October, 1930, to 16th July, 1931)	160

2.—Abington Park Lake. Cleaning bottom. (22nd January to 16th April, 1931)	42
3.—Kingsthorpe Bathing Place. Construction of paddling pool. (22nd January to 23rd July, 1931)	20
4.—Dallington Park. Levelling playing pitch. (29th January to 16th April, 1931)	20
5.—Non-classified roads (£65,000 loan scheme). Reconstruction of roads. (5th March to 1st October, 1931)	145
6.—Main Drainage Scheme. Contract works—contracts 1, 2, 3, and 4. (Commenced 6th July, 1931—works incomplete)	202

Meteorology

As in former years, the records (*see* Table 4, page 79) from which these notes were compiled were supplied by Mr. R. H. Primavesi. The chief point of note, and one which will be remembered by all who take an interest in the weather, was the almost complete failure of the summer as we understand that word, not so much due to an abnormally heavy rainfall as to the lack of sunshine. How much the latter fell below the normal for the Borough I have no means of knowing, but it was certainly considerable. 1931 was not marked by any extremes of temperature, but the mean in the autumn months was considerably above the average. The mild autumn and winter will be long remembered. The highest shade reading recorded during the year was 78·0°F. on 28th June and the lowest 23·5°F. on 10th March. There was no prolonged period of frost. There were forty-nine cold nights, *i.e.*, nights on which the temperature fell to 32°F. (freezing point) or below. The total rainfall was 22·67 inches, which is 1·74 inches below the average for twenty-seven years. The first three months were dry, the total at the end of the quarter being only 3·18 inches. August was the wettest month with 3·53 inches. The heaviest fall in twenty-four hours was 1·05 inches on 8th August, which only exceeded by 0·05 inches the amount registered on 14th July. There was very little snow during the year. Unfortunately we have no record of the velocity of the wind, but one cannot recall any outstanding gales during the year, and looking through the direction records it would appear that easterly wind was not so prevalent as usual.

Other Statistics

The notes on infant mortality, the incidence and mortality from infectious diseases, housing conditions, and other statistics usually included in the annual report, will be found under the headings referring to these matters.

Attention is directed also to the vital statistics on page 7, and to Tables A, B, C, and D at the end of this report.

II.—GENERAL PROVISION OF HEALTH SERVICES.

Local Government Act, 1929

The coming into force of this Act on 1st April, 1930, has not made much difference either to the public health service or to the poor law service, which was transferred from the Board of Guardians to the Public Assistance Committee of the Corporation. The functions definitely transferred to the Public Health and Maternity and Child Welfare Committees by the Act, viz :—vaccination (*see* page 38) and infant life protection (*see* pages 49 and 73), are being carried out by those committees respectively. As mentioned on page 15, it has not been found possible to transfer the infirmaries at the Institution, Wellingborough Road, to the Public Health Committee, the whole institution being administered as a "mixed institution" by the Public Assistance Committee under the general supervision of the Medical Officer of Health.

No "declaration" has been made by the Council, except regarding the education of children (Education Act, 1921).

So far there has been no meeting of the Public Health Committee or Public Assistance Committee with the Northampton General Hospital authorities under Section 13 of the Local Government Act, 1929. One probable reason why such a meeting has not taken place is that there was no very urgent call for it as the General Hospital is able to undertake the treatment of all acute cases, which the Public Assistance Infirmary could not help in relieving, though it can receive from the General Hospital chronic incurable patients as requested by the Hospital authorities. A meeting under Section 13 of the Local Government Act will take place when found necessary.

Poor Law Medical Out-Relief

For this purpose the Borough is divided into three districts. The Medical Officer of No. 1 District (comprising the wards of Abington, Kingsley, St. Crispin's, St. Edmund's, St. Michael's, and South, with a population of approximately 43,000) is Dr. E. Robertson, 220, Kettering Road. No. 2 District (population about 44,000) comprising Castle, Kingsthorpe, North, St. James,' and St. Lawrence's Wards is allotted to Dr. J. Cullen, 8, Langham Place. No. 3 District contains Delapre Ward only (population about 7,000), the Medical Officer being Dr. H. F. Percival, 2, Spencer Parade. They also act as public vaccinators in the same districts. These officers were taken over by the Council along with Dr. C. Mills, the non-resident Medical Officer of the Poor Law Institution, when the work of the Guardians was transferred to the Public Assistance Committee on 1st April 1930. No changes have been brought about so far as poor law medical out-relief is concerned owing to the transfer. The three District Medical Officers referred to are, by an arrangement between the Northamptonshire County Council and the County Borough Council, still acting for the same areas as they

did under the late Boards of Guardians, the apportionment of the salaries between the two authorities being agreed upon.

Mental Deficiency Act, 1913

During the year a survey of the work of the Mental Deficiency Committee was carried out by Miss M. Laxton, one of the organisers under the Central Association for Mental Welfare. The whole subject was reviewed very thoroughly and while the report acknowledged that much valuable work was being carried out in the Borough by the existing schemes, it was suggested a full-time paid organiser should be appointed to deal with and advise mental defectives and their guardians as to the best means of dealing with these cases and to co-ordinate the work now in progress. It was also recommended that a mental welfare association should be formed absorbing all the existing agencies at present working on the problem. Miss Laxton's report was discussed by the Mental Deficiency Committee and also by the Education Committee, but was not adopted by the Town Council at its meeting on 10th November, 1931.

The number of known mental defectives in the Borough given in the report was :—

Statutory cases	67
Education cases	365
At Public Assistance Institution	29
Referred from other sources	29
Total	490

Northampton, like most towns and counties, suffers from lack of suitable accommodation for the mentally defective and I am afraid the scheme now being commenced at Bromham House, near Bedford, in conjunction with Northamptonshire and Bedfordshire County Councils, will not completely solve the problem. It is essential that we move the mental cases from Wellingborough Road Institution as soon as possible, as the latter institution is the wrong place for them. To herd together the various degrees of mentally defective with the normal is contrary to sound practice. It is also contrary to the spirit of the Local Government Act, 1929.

Mental Treatment Act, 1930

The Mental Treatment Act, 1930, came into force on 1st January, 1931. The new Act seeks to remove the stigma which has attached to insanity from very remote times and to place mental illness side by side with other forms of sickness. The Act also seeks to establish a preventive side to mental work, thus bringing the latter into line with modern medical practice. Provision is made for the treatment of (*a*) voluntary patients and (*b*) temporary patients. Up to the end of the year we had

not received any applications from persons wishing to be treated as either voluntary or temporary patients.

Under Section 6 of the Act an out-patient clinic for persons suffering from early mental disorder was established by the Local Authority, in conjunction with the General Hospital authorities, and is held weekly at the General Hospital, being conducted by Dr. E. D. T. Hayes, a member of the medical staff at Berrywood Mental Hospital. Thirty-six Borough residents received treatment or advice at the clinic up to the end of December.

Public Health Officers

A list of the whole-time officers of the Public Health Department will be found on page 6.

Prior to 1931, the part-time officers connected with the Department included two medical officers, one male orderly, and one nurse at the Venereal Diseases Clinic ; one non-resident medical officer and his deputy at the Public Assistance Committee's Institution, Wellingborough Road ; three public vaccinators who also act for poor law medical out-relief ; a public analyst ; and two vaccination officers. During 1931 a consultant obstetrician and a veterinary surgeon were added to the part-time staff.

The staff employed in the school medical service is mentioned in the paragraph dealing with that subject on page 18.

Nursing in the Home

No change has been made in this service since my last report, where an account appears on page 11.

Midwives

It has not been found necessary to subsidise any midwife and no practising midwife is employed by the Local Authority beyond those on the staff of the Poor Law Infirmary. Twenty-five midwives gave notice of intention to practise during 1931. (*See also* paragraph in Appendix II., page 68).

Laboratory Facilities

No change was made with respect to the carrying out of this work during the year under review. (*See* page 12 of 1930 report).

Legislation in Force

It is not proposed to reprint the list of Local Acts, General Adoptive Acts, and Bye-laws relating to public health in force in the Borough given on pages 12 and 13 of last year's report, but the following require to be added to the Local Acts and Orders to bring the list up to date :—

Northampton Extension Act, 1931.

The Northampton (Public Works Facilities, Compulsory Purchase) Confirmation (No. 1) Order, 1931.

The Northampton (Public Works Facilities, Compulsory Purchase) Confirmation (No. 2) Order, 1931.

The Northampton (Public Works Facilities, Compulsory Purchase) Confirmation (No. 3) Order, 1931.

The Northampton (Grafton Street) Housing Confirmation Order, 1931.

A full account of the four municipal hospitals was given on pages 14, 15, and 16 of my last report. The following needs to be added to bring the information up to date :— Hospitals

Harborough Road Infectious Diseases Hospital. Mention was made of certain improvements at this hospital. The addition to the administrative block, comprising what is practically a new nurses' home, was completed and opened by His Worship the Mayor (Mr. Councillor E. Ingman, J.P.) on 3rd September. The building is up-to-date in all respects, with central and electric heating, hot and cold water being installed in all bedrooms. In addition to the new building, alterations were made in the existing one, central heating being installed throughout. The kitchen was altered and enlarged, a double gas cooking range being substituted for the old one and the obsolete coal range was removed. A new maple floor was laid in Ward II. and the roof of this ward, along with that of the Isolation Block (A and B) was re-tiled. The whole of the institution was re-decorated inside and out. (*See* also page 41).

Welford Road Tuberculosis Hospital. The additions and alterations here were commenced in the autumn and were almost completed in April, 1932. The additions to the wards comprise two cubicles, one on the male and the other on the female side, for the reception of patients who are very ill and require more quietness than can be obtained in the large wards. Work is also progressing on the administrative block to provide additional bathrooms, etc. During the autumn, electricity was introduced to replace gas as a means of lighting and has proved a great success. (*See also* page 56).

Smallpox Hospital. This hospital has been maintained in a good state of repair and in such a condition as to be able to receive patients, if need be, at a few hours' notice. (*See also* page 41).

The Infirmary, Wellingborough Road Institution. For some time it had been the hope of many members of the late Board of Guardians that it would be possible to get rid of the antiquated institution, formerly called the Workhouse, with its old badly-planned infirmaries, lacking so many modern requirements, and build a new municipal general hospital on the outskirts of the Town, probably at Kingsthorpe, and it was thought the coming into force of the Local Government Act would have proved a stimulus to this project, but the present grave financial crisis has convinced most, if not all, members of the Council that such an undertaking is out of the question for some time to come. Owing to the impossibility of separating the infirmaries from the rest of the institution, the Public Health Committee was not able to appropriate the infirmaries under the Public Health Acts and, although they came under the Corporation with the coming into force of the Act of 1929, they still remain under

the administration of the Public Assistance Committee. As stated in my last report (pages 15 and 16), both the male and female infirmaries are very old and badly planned, being three-storeyed buildings without lifts or operating theatre and incapable of being brought up to date, but improvements can be made in them, and this matter, together with additions to the nurses' home, are now being considered by the Committee, working on the lines suggested in the reports submitted by the Medical Officer of Health. There is no children's ward ; children under the care of the Public Assistance Committee requiring institutional treatment will receive it at the General Hospital by arrangement, or if the disease be infectious they will be treated at Harborough Road Hospital.

A description of Northampton General Hospital, Manfield Orthopaedic Hospital, and Creaton Sanatorium appeared in my report for 1930, pages 16 and 17. Further reference is made to Manfield Hospital on pages 47, 57, and 67 of this report and to Creaton Sanatorium on page 56.

Maternity and Nursing Homes

At the end of December, 1931, there were on the register seven nursing homes, viz :—

Maternity Homes	2
Mixed Home	1
Homes for Aged and Infirm, etc.	3
Home for Mothers and Babies	1

The last mentioned institution is St. Saviour's Home, which is conducted by the Peterborough Diocesan Authorities and was fully described on page 18 of my last report.

The Northampton General Hospital and the Nursing Home at Bethany Homesteads are exempted annually under the provisions of Section 6 of the Nursing Homes Registration Act, 1927.

There were no new applications for registration in 1931, but one home formerly registered for maternity cases was re-registered to take not more than three medical or surgical patients at any one time. The keeper of a house registered for one non-maternity case removed and the registration, therefore, lapsed.

All these institutions were visited and inspected at regular intervals by the Assistant Medical Officer for Maternity and Child Welfare, or by her deputy, the Senior Health Visitor, who was appointed during the year by the Local Supervising Authority to carry out this duty. (*See* pages 47 and 69).

Institutional Provision for Unmarried Mothers, etc.

No changes have been made in the institutional provision for unmarried mothers, illegitimate infants, and homeless children, described on page 18 of the report for 1930.

Ambulance Facilities

INFECTIOUS CASES. A new motor van was purchased during the year. Whilst it may be called a van and its chief use is for the removal of bedding to and from the Disinfecting Station, it is so constructed as to be readily converted into an efficient ambulance. Soon after obtaining delivery of the above, we disposed of one of the old Ford ambulances, which had been in constant use either with the St. John Ambulance Brigade or under the Public Health Committee since 1916. At the present time the Department owns two motor ambulances and one vehicle which can be used either as an ambulance or a van.

NON-INFECTIOUS AND ACCIDENT CASES. Ambulance facilities for these are provided by the Northampton Branch of the St. John Ambulance Association.

MATERNITY PATIENTS. These are also moved by the Ambulance Association.

Clinics and Treatment Centres

The Maternity and Child Welfare Centres, School Clinic, Orthopaedic Clinic, Tuberculosis Dispensary, and Venereal Diseases Clinic were described on pages 19 and 20 of last year's report. The only alteration to record is the establishment of a new clinic at the General Hospital for the treatment of early cases of mental disease under the Mental Treatment Act, 1930. Mention has already been made of this on page 14.

Maternity and Child Welfare

The information asked for by the Ministry of Health in Circular 1206 with regard to maternal mortality, the arrangements for the visiting of children between the ages of one and five years, and the administration of Part I. of the Children Act, 1908, is given in the section dealing with maternity and child welfare, pages 47 to 50.

Blind Persons

The Blind Persons Act is administered by the Blind Persons Committee, consisting of His Worship the Mayor and twelve members, eight being members of the Borough Council and four co-opted. At the end of the year there were in the Town 133 persons certified as blind within the meaning of the Blind Persons Act. Of these :—

4 were in the Wellingborough Road Institution ;
1 was at the Home for the Blind, Southend-on-Sea ;
4 were in school at Birmingham ;
3 were in training at Birmingham ;
28 were employed in the Workshops, Gray Street ; and
93 were classified as unemployable and were living at home or in lodgings.

Those employed in the Workshops, Gray Street, receive an augmentation grant of one pound per week to supplement their earnings.

The unemployables have their incomes (from whatever

source derived) made up to twenty-five shillings per week by the Blind Persons Committee.

There is a handicraft class for the unemployable blind attended by some fifteen persons, and a home teacher is provided, who gives her whole time to Borough cases.

No action has been taken under Section 66 of the Public Health Act, 1925, for the prevention of blindness or for the treatment of persons suffering from any disease or injury to the eyes.

School Medical Service

The Medical Officer of Health, acting as School Medical Officer in an administrative capacity, is able to keep the Public Health and School Medical Departments in close touch with each other, much closer than would otherwise exist. The Assistant School Medical Officer, Dr. Mason, assisted on three half-days per week by Dr. Atteridge and by the Tuberculosis Officer, Dr. Laughton, on two half-days (under an arrangement mentioned in my last report, page 21) was able to work off the arrears in school medical inspection and bring the routine inspections up to date so as to satisfy the requirements of the Board of Education. No changes were made in the Staff of the School Clinic. The appointment of an additional clerk in the Dental Clinic in 1930 to provide extra chair-side assistance for the dental surgeons has proved a success, as it allows the dentists to devote more time to the part of their work requiring the highest skill instead of having to spend it on sterilisation of instruments, etc., which can be well performed by a clerk. The work of the Clinic again proceeded smoothly, including the arrangements with the General Hospital authorities for the removal of tonsils and adenoids.

The whole-time staff employed on school medical work at the close of the year was one medical officer designated as Assistant School Medical Officer, two dentists, three nurses, and four clerks. Two medical officers devote part time to school inspection and an ophthalmic surgeon and a radiologist are also employed part-time. Arrangements have been made in addition for the services of an ear, throat, and nose specialist for the removal of tonsils and adenoids.

The average number of scholars on the school registers was 12,345, the average attendance being 11,338 (91·8 per cent.).

The annual report of the School Medical Officer, prepared according to the requirements of the Board of Education for the Education Committee, is published separately and gives details of the work performed by the school medical service.

(*See also* " Schools," page 23).

III.—SANITARY CIRCUMSTANCES.

Water

The sources of the Borough water supply were described in the report for 1930. No important extensions of the service were undertaken during 1931. The average daily consumption

per head for the year was 20·77 gallons, which was adequate for all purposes.

Sixteen samples were taken for analysis, twelve being sent to the Bacteriologist and four to the Public Analyst for chemical examination. The smallest amounts of water in which typical B. Coli were found were 1 c.c. on 4th March and 10 c.c. on 28th January; with these exceptions they were never found in less than 50 c.c. Apart from the sample on 4th March, the number of organisms found per c.c. was very small, for example, on nutrient agar at 37°C. they averaged sixteen in two or three days. As stated in previous reports, this, in my opinion, is one of the most reliable tests of purity. After each chemical examination the Public Analyst reported that in his opinion the water was suitable for drinking purposes. Appended will be found typical bacteriological and chemical reports:—

Bacteriological Report. (Sample No. 286, taken 20th November).

"No typical B. Coli recovered from 100 c.c. or less of sample.

Atypical B. Coli present in 20 c.c. of sample but not less.

10 c.c. McConkey plates	2 colonies.
1 c.c. Nutrient Agar	12 colonies.
1 c.c. Nutrient Gelatine	12 colonies plus 1 liquefying colony.

Bacteriologically this is a very good sample of water."

(Eric H. Shaw, *Bacteriologist*).

Chemical Report. (Sample No. 170, taken 11th August).

	Grains per gallon.
Total Solids	22·40
Combined chlorine	1·68
equal to Sodium Chloride	2·77
Nitrogen as Nitrates	0·08
Nitrogen as Nitrites	nil
Saline Ammonia	0·0007
Albuminoid Ammonia	0·0059
Oxygen absorbed from Permanganate (4 hours at 80°F.)	0·05
Hardness (temporary)	12·60
Hardness (permanent)	1·23
Hardness (total)	13·83

Remarks:—This sample has the usual character of the Town supply and is, in my opinion, satisfactory for drinking purposes."

(A. Prideaux Davson, *Public Analyst*).

Houses with Insufficient Water Supply

In some of the older parts of the Borough, blocks of houses have hitherto been supplied with Town water from a standpipe in the yard or forecourt, common to all the houses in the block, so that in some instances eight or ten families would draw their supply from the common tap. These premises have

no flushing cisterns to the water closets and the distance of the common tap from the closets leads to very infrequent and inadequate flushing. Houses with this form of supply have been taken in hand from time to time with a view to having water installed on the premises, but not necessarily indoors, because many of them are not fitted with sinks and in some there is no suitable situation in which to place one. Secondly, until the Council adopted Section 49 of the Public Health Acts Amendment Act, 1907 (which came into force in the Borough on 21st March, 1932), we were not in a position to enforce the provision of sinks with the necessary drainage for carrying off waste water. During 1930 twenty-six houses were supplied with Town water on the premises and in 1931 ninety-three were so dealt with.

Polluted Wells

Particulars regarding the closing of the " Jubilee Well," Kingsthorpe, on account of pollution will be found under the heading " Enterica " on page 36.

Another well in Kingsthorpe (situated in the back garden of a house in Manor Road), from which five houses drew their supply, was found on examination by the Public Analyst to be so polluted as to be unsafe for drinking purposes. Acting on this information the Borough Surveyor certified the premises as being without a proper water supply. The Local Authority ordered Town water to be laid on and the owners filled in the well voluntarily.

A similar position arose over a well in Harborough Road supplying four houses. Town water was laid on to the houses concerned and the use of the well water was restricted, on a magistrates' order, to non-domestic purposes.

Rivers and Streams

No action was taken with regard to the River Nene or any of its tributaries, as they were not so polluted as to be a nuisance or dangerous to health. Whilst not suitable for drinking purposes the river is quite fit for non-domestic use.

Drainage and Sewerage

The reconstruction of the main sewers of the Borough, together with the outfall works, etc., was commenced during 1931, the contract being divided into four portions, each part being undertaken by a different firm of contractors. The work is not expected to be completed before 1933 (at a cost of over £200,000) when a full report of the scheme will appear. At the present time a resident chemist is in charge of the laboratory at the Sewage Disposal Works, Great Billing, where daily examinations of the effluent are made, the whole being under the direction of the Borough Surveyor, who has kindly furnished me with the following information regarding drainage work carried out by, or under the supervision of, his Department during the year :—

Provision of sewers and surface-water drains, Kettering Road Housing Estate (sections 2, 3, and 4).
Main Drainage Scheme (parts of Far Cotton and St. James' main drainage).
Reconstruction of sewer, Arthur Street.
New sewer, Mill Lane, Semilong (private street works).
Repairs to sewers after subsidence in Campbell Square, Lower Mounts, and Kingsley Road.

Closet Accommodation

No conversions from the conservancy to the water-carried system of sewerage were made and none are necessary, as the few conservancy closets (eleven) which exist in houses within the Borough are not in populous and closely built centres, but are in situations where it is not possible to connect with an existing sewer. There are, in addition, two works premises with closets on the conservancy system.

Scavenging

No extension or improvement in the methods of scavenging or refuse disposal were made during the year, as none were required. The methods recently introduced in the Borough were explained in my report for 1930 (pages 23 and 24) and all one needs to add is that the scheme is working satisfactorily and is a great improvement on anything in vogue prior to its instalment.

Sanitary Inspection

The work of the sanitary inspectors is summarised in Table 5 (page 80) and Tables 6 and 7 give further particulars in connection with house drainage. During the year, 1,863 houses were inspected, of which 1,122 were found to require some attention, with the result that 778 were repaired and 651 were cleansed and whitewashed, while others were dealt with as the conditions required, details of which appear in Table 5.

Smoke Abatement

There are few factory chimneys in Northampton, in spite of its being an industrial town, and the Local Authority has not found it necessary to make bye-laws relating to the emission of black smoke. From time to time one reads in the press and receives literature regarding smoke abatement, from which one is rather led to infer that considerable damage is done by house smoke and to see in the propaganda an attempt to get householders to use smokeless fuel of one kind or another in domestic grates. Personally, I do not think much harm is done by domestic smoke ; it is the smoke from factory chimneys which is harmful to buildings, etc., and probably is a source of respiratory complaints, especially in old persons. If one compares the atmospheric conditions in Northampton with those prevailing in a town of equal size in Lancashire when the cotton trade is (or was) working under normal conditions, one is immediately struck by the difference. There will be approxi-

mately the same number of house chimneys emitting smoke in the two towns, but in the Lancashire town there may be anything up to a hundred factory chimneys belching forth and it is these which make the difference in the atmosphere. I would require much convincing that the use of smokeless fuel for domestic purposes is called for in Northampton, at least on the score of smoke abatement. If it be advocated as an economic measure there may be something in it, but upon that point I am not qualified to speak.

Canal Boats

The Annual Report under the Canal Boats Acts was dispatched to the Ministry of Health before the appointed date, 21st January. Mr. Knowles, the Canal Boats Inspector, inspected twenty-five boats, which were registered to carry eighty-three adults. The actual number of occupants at the time of inspection was fifty-one adults and twenty-seven children. One boat was overcrowded and one was without a certificate, was not properly marked, and required repairs. No case of infectious disease occurred. The number of boats on the register and believed to be in use is three.

Common Lodging Houses

The number of common lodging houses on the register at the end of 1931 was four, the same as in the previous year, with accommodation for 161 men. There is no common lodging house accommodation for females, these (being occasional travellers) find shelter in the casual wards at the Union. The premises were visited at frequent intervals by Inspector Walker, whose duty it is to carry out this work. The Medical Officer of Health and Chief Sanitary Inspector also visited from time to time. One of the registered premises is old and not in a very good state of repair and I think its end cannot be long delayed, unless a considerable amount of money is spent on the old building. Small defects were discovered on several of the visits, but these were remedied without any legal proceedings.

We have no houses let in lodgings.

Factories and Workshops

Table E, right at the end of this report, gives an account of the work done under the Factory and Workshop Act, 1901, set out in the prescribed form. The general scheme under which the Act is worked is that H.M. Inspector of Factories supervises the sanitary condition of all textile and non-textile factories, leaving the sanitary authority to take charge of workshops, workplaces, and domestic factories. If the Factory Inspector finds an insanitary condition in a factory he refers the matter to the local sanitary authority for necessary action.

Offensive Trades

Though the names of two tanners and three tripe boilers are on the register of offensive trades, these businesses are actually carried on without giving the slightest offence to anybody. This is chiefly due (as regards the tanners) to

modern methods employed in dealing with flesh adhering to raw hides. The premises were kept under observation, but no infringements of the bye-laws were observed or complaints received.

Tents, Vans, Sheds, etc.

There are no permanent tent or caravan dwellers in the Town. At fair times, however, there is the usual influx of such people. The supervision of these is provided for by the bye-laws, which the sanitary inspectors enforce.

Premises Controlled by Bye-laws, etc.

Particulars of these, excepting the above-mentioned, will be found in Section V. (pages 29 to 35) dealing with food, as they comprise cowsheds, dairies, bakehouses, slaughter-houses, ice cream shops, etc.

Disposal of the Dead

There are three cemeteries for the disposal of Northampton's dead. Two are owned by the Corporation and one by a company. Both the Corporation cemeteries are at present situated outside the Borough, but will be brought within it when the boundaries are extended on 1st April, 1932.

1.—Kingsthorpe Cemetery, owned by the Corporation, half-a-mile outside the Borough boundary, has at present an area of thirteen acres, with room for further extensions up to twenty-eight acres. It was opened in April, 1889.

2.—Towcester Road Cemetery, opened in March, 1902, is also owned by the Corporation. It is a quarter of a mile outside the Town and covers fifty-four acres, the area of the portion enclosed for interments being eighteen and a quarter acres. There is thus ample ground for all requirements for many years.

3.—The General Cemetery in Billing Road is owned by a company. It was formed in July, 1847, and added to in 1882, and covers about thirteen acres. There is no available land for the extension of this burial ground, as it is built up all round.

During the night of 22nd-23rd April, there were re-interred in Towcester Road Cemetery the bodies of seven persons, who had been buried between 1878 and 1914 within the precincts of Northampton Gaol on The Mounts. The bodies were exhumed and re-buried in accordance with the requirements of the Home Office. The gaol has been demolished and the site allotted to the new municipal buildings.

Schools

The Medical Officer of Health, the Assistant School Medical Officer, and the sanitary inspectors have kept the sanitary condition of the schools under their purview during the year. While some (in fact most) of the older schools of the Town are a long way from reaching the ideal of modern requirements, according to the view of the Board of Education, none of them are in such a condition as to structure or sanitary defects as to be dangerous or injurious to the health of the

scholars attending them. These schools could not be made comparable with the new ones and as they are mostly situated in the older central parts of the Borough, from which families are migrating to the outskirts, some of them will eventually become redundant. All are supplied by Town water and the closet accommodation is adequate.

There have been no epidemics of infectious disease during the year under survey, consequently the question of closing any school in order to prevent the spread of disease did not arise. In any case such measures are not favoured in these days; the exclusion of contacts and keeping them under observation during the incubation period of the particular disease is more effective and causes less disturbance to the school curriculum.

All the schools erected since the war are on open-air lines ; for all practical purposes they are open-air schools.

Rag Flock Acts, 1911 and 1928

There are a few premises in the Borough where rag flock is used in the manufacture of low-priced furniture. These were visited by the Chief Sanitary Inspector on seventeen occasions and on each visit the invoices were examined to ascertain if they contained the guarantee that the flock reached the standard prescribed in the Acts, and as the guarantees were forthcoming no samples were taken.

Rat Repression

The Chief Sanitary Inspector, the official Rat Officer, supervised the work of the Borough Rat-catcher, who continued to be at the service of any ratepayer requiring his help, irrespective of " Rat Weeks." Table 8, on page 83, shews the result of his efforts.

IV.—HOUSING.

Council Houses

The Borough Engineer has again supplied the Department with particulars of the progress made under the municipal housing schemes :—

Total number of houses completed between 1st January and 31st December, 1931, under the Corporation Schemes	230
Number of these within the Borough boundary ..	202
Total number of houses erected by the Corporation both inside and outside the Borough up to 31st December, 1931 :—	
Houses	2,770
Shops and houses	32

Other New Buildings

In addition to the above, the following private building operations, plans for which had been approved by the Highways

Committee, were carried out within the Borough during the year :—

New houses	158
Alterations and additions to dwellinghouses	15
Shops and houses	5
Alterations and additions to shops	12
New shop with flats over	1
Conversion of houses into flats	2
Shop-fronts to dwellinghouses	9
New bakehouse	1
Re-building of factory after fire	1
Extensions to factories	3
Extensions to warehouses	5
New offices and buildings	5
Alterations and additions to places of worship	4
Additions to hospitals	2
Extension to brewery	1
Alterations and additions to licensed premises	8
Extensions and alterations to clubs	2
Alterations and additions to cinemas	2
Extension to pavilion on sports ground	1
Garages	70
Garages (temporarily licensed)	6
Electric light sub-stations	7
New water closets	8
Other temporarily licensed buildings	5

Housing Acts

Tables 9 and 10 (pages 84 and 85) contain particulars of houses represented in 1931 and previous years. It will be seen that thirteen dwellinghouses were represented by the Medical Officer of Health during the year, under Section 19 of the Housing Act, 1930, because they appeared to be in a state so dangerous or injurious to health as to be unfit for human habitation and were not considered capable of being rendered fit at a reasonable expense. Twenty-nine demolition orders were made ; twelve of these were under the 1925 Act and seventeen under the 1930 Act. Twenty houses were demolished in pursuance of demolition orders and four after closing orders only. The demolition of three other houses was in progress at the end of December, another was converted into a garage, two were repaired, and four others were allowed to stand empty on the owner undertaking that they would not be used again for human habitation. Only five represented houses were still occupied when the year closed.

No houses were dealt with under Section 17 of the Housing Act, 1930. In the case of the five houses in Castle Gardens mentioned on page 27 of my last report, the work has been completed.

The staff made 642 visits of house-to-house inspection under the Housing Consolidated Regulations, 1925, and in

these defects were found in 481, chiefly want of cleanlines and repairs.

Slum Clearance

As mentioned on pages 31 and 32 of my report of 1930, the Town Council adopted a five years' programme of slum clearance under the Housing Act, 1930, and the following progress had been made up to the end of 1931 :—

No. 1 Clearance Area (Grafton Street Area) was officially represented to the Housing Committee by the Medical Officer of Health on 12th January, 1931, and this was adopted by the Town Council on 26th January. A list of persons interested in the property in the area was supplied to the Town Clerk by the Public Health Department. The Council made a Compulsory Purchase Order and on 16th June a public inquiry was held at the Town Hall by R. W. Thorpe, Esq., A.R.I.B.A., on behalf of the Ministry of Health. The Compulsory Purchase Order was confirmed by the Ministry on 5th August with slight modifications resulting from the public inquiry, viz :—three properties were to be treated as property to be acquired by the Council under Section 3 of the Housing Act, 1930. Included in the area were fifty-four houses occupied by fifty-three families comprising 221 persons, or a little over four persons per house. The number of families re-housed in Corporation houses up to 31st December, 1931, was seventeen and up to that date one other family had moved to a house privately owned.

At the time of writing (April, 1932), all have been re-housed and the work of demolition nearly completed. No. 2 Clearance Area (Scarletwell Street Area) has now been taken in hand.

Public Health Acts

Two houses, or parts of houses, were certified by the Medical Officer of Health under the terms of Section 46 of the Public Health Act, 1875, as being in such a filthy or unwholesome condition that the health of the occupants was affected or endangered thereby, and that the cleansing and whitewashing were urgently required. Notices were served and the work done.

Prose-cutions

Apart from legal proceedings under the Food and Drugs (Adulteration) Act, 1928, detailed in the paragraph dealing with that subject on page 34, it was not necessary to take legal action against any person to enforce compliance with notices under the Public Health or Housing Acts.

Sufficiency of Supply of Houses

In spite of the number of houses built in Northampton since the war (chiefly by the Council) and the small increase in the population, there still appears to be a considerable demand for houses of the smaller and cheaper type. With the continued trade depression this call for cheaper houses with lower rents will become greater, for while it is possible

to pay the high rents asked for Council houses when the head of the family is in full work, the pinch is quickly felt during periods of short time or unemployment. It is for this reason a move should be made to build cheaper houses for the working classes.

Over-crowding

No marked increase of overcrowding came to our notice during the year, the number of actual cases remaining much the same throughout the twelve months. Seven cases were abated and eleven new ones were added to the list and sixteen overcrowded houses remained at the end of the year. There are at least three methods of estimating overcrowding, but the standard adopted in the Borough is that overcrowding is considered to exist if the sleeping accommodation does not provide at least three hundred cubic feet of air space per person over the age of ten years, or half that amount under ten years. No legal action was taken in any instance of overcrowding.

Housing Statistics

The particulars for 1931 are set out below in the form required by the Ministry of Health :—

1.—*Inspection of Dwellinghouses.*

(1) (*a*) Total number of dwellinghouses inspected for housing defects (under Public Health or Housing Acts)	1,863
(*b*) Number of inspections made for the purpose	1,863
(2) (*a*) Number of dwellinghouses (included under sub-head (1) above) inspected and recorded under the Housing Consolidated Regulations, 1925	642
(*b*) Number of inspections made for the purpose	642
(3) Number of dwellinghouses found to be in a state so dangerous or injurious to health as to be unfit for human habitation	13
(4) Number of dwellinghouses (exclusive of those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation	1,109

2.—*Remedy of Defects without Service of Formal Notices.*

Number of defective dwellinghouses rendered fit in consequence of informal action by the Local Authority or their officers	451

3.—*Action under Statutory Powers.*

A.—Proceedings under Sections 17, 18, and 23 of the Housing Act, 1930 :—

(1) Number of dwellinghouses in respect of which notices were served requiring repairs	0
(2) Number of dwellinghouses rendered fit after service of formal notices :—	
(*a*) By owners	0
(*b*) By Local Authority in default of owners	0

B.—Proceedings under Public Health Acts :—

(1) Number of dwellinghouses in respect of which notices were served requiring defects to be remedied 662

(2) Number of dwellinghouses in which defects were remedied after service of formal notices :—

(*a*) By owners 595

(*b*) By Local Authority in default of owners 0

C.—Proceedings under Sections 19 and 21 of the Housing Act, 1930 :—

(1) Number of dwellinghouses in respect of which Demolition Orders were made 17

(2) Number of dwellinghouses demolished in pursuance of Demolition Orders 10

D.—Proceedings under Section 20 of the Housing Act, 1930 :—

(1) Number of separate tenements or underground rooms in respect of which Closing Orders were made 0

(2) Number of separate tenements or underground rooms in respect of which Closing Orders were determined, the tenement or room having been rendered fit 0

E.—Proceedings under Section 3 of the Housing Act, 1925 :—

(1) Number of dwellinghouses in respect of which notices were served requiring repairs 0

(2) Number of dwellinghouses rendered fit after service of formal notices :—

(*a*) By owners 0

(*b*) By Local Authority in default of owners 0

(3) Number of dwellinghouses in respect of which Closing Orders became operative in pursuance of declarations by owners of intention to close 0

F.—Proceedings under Sections 11, 14, and 15 of the Housing Act, 1925 :—

(1) Number of dwellinghouses in respect of which Closing Orders were made 0

(2) Number of dwellinghouses in respect of which Closing Orders were determined, the houses having been rendered fit 0

(3) Number of dwellinghouses in respect of which Demolition Orders were made 12

(4) Number of dwellinghouses demolished in pursuance of Demolition Orders 10*

* Four more dwellinghouses were demolished in pursuance of Closing Orders only.

Other Housing Matters

Reference should be made to Section III. "Sanitary Circumstances" for other information bearing on housing.

The estimated number of inhabited houses in the Borough on 31st December, 1931, was 23,950.

V.—INSPECTION AND SUPERVISION OF FOOD.

Milk Supply

The bulk of the Town's milk supply comes in from the surrounding country, only eighty-two cows being housed in the Borough during the winter months and turned out to grass late in the spring. The premises of registered producers are kept under supervision by the sanitary inspectors, with occasional visits by the Medical Officer of Health, to ensure they are kept in a clean condition.

It is estimated that slightly less than half the milk consumed in the Town is "Pasteurised" before sale, about five per cent. is "Grade A (Tuberculin Tested)," and one per cent. sterilised.

The report on the chemical examination of milk by the Public Analyst will be found on page 34 under the heading dealing with the Food and Drugs (Adulteration) Act, 1928.

Milk in Schools

The scheme of supplying school children with one-third of a pint of "Pasteurised" milk in a bottle, together with a straw for taking the milk, at the price of one penny per bottle, reached its height in early summer when 27,594 bottles were supplied in one week, the number of scholars taking the milk was 5,519 out of 12,345 on the registers. Since then there has been a falling off, most marked when colder weather came. Up to the end of the year the scheme had been self-supporting, but whether it will continue on those happy lines one cannot say.

Tuberculosis Order, 1925

On 10th November the Town Council appointed Mr. T. G. Marriott, M.R.C.V.S., as Veterinary Inspector under the Tuberculosis Order, 1925. Mr. Marriott has arranged to inspect all the dairy cows kept in the Borough twice annually with a view to detecting any suffering from tuberculosis. He will, when necessary, take samples of milk from any suspected cow for examination for the presence of the tubercle bacillus. If any tuberculous cows are found they will be slaughtered. Reports as to the results of the examinations will be forwarded to the Medical Officer of Health to be brought before the Public Health Committee at its monthly meetings. This action is in addition to the taking of samples from retailers in the street for examination for tubercle bacilli.

Five specimens of milk were examined by inoculation tests for the presence of tubercle bacilli, but none were found. One of these samples was taken by Mr. Marriott.

Dairies, Cowsheds, and Milkshops

At the end of December, eleven cowkeepers, 175 retail dairymen, and five wholesalers were on the register. Twenty-four of these retailers live in the country districts around the Town and their premises were inspected by the rural authorities and pronounced fit for the purpose before they were placed on our register. In addition, 109 persons are allowed to sell milk in bottles only, on condition the seal of the bottle is intact when it leaves the premises. These are persons whose premises are not considered suitable for the sale of loose milk. Seventeen certificates of registration were issued, all but one being transfers. The inspectors made 472 visits to registered premises and defects were found and remedied in fifteen of them.

Sterilised Milk

The demand for sterilised milk remains much as in previous years. Seventy-five retailers and two wholesalers are permitted to distribute it.

Milk (Special Designations) Order, 1923

At the end of 1931, the following licences under this Order were in operation :—

Dealers' licences to use the designation " Grade A (Tuberculin Tested) " :—

(a) bottling establishments 3

(b) shops 7

Dealers' licences to use the designation " Pasteurised " :—

(a) Pasteurising establishments 2

(b) shop 1

These licences were held by ten dairymen.

There is no appreciable demand in the Borough for " Certified " milk and no licence to sell under the designation was issued.

Thirty-eight samples of milk were taken for bacteriological examination, viz:—fifteen "Grade A (Tuberculin Tested)", eight " Pasteurised " sold as such, two " Pasteurised " sold in bottles as ordinary milk, four ordinary milk in bottles, eight ordinary loose milk purchased in the street or from a dairy, and one sterilised milk.

Of the designated milks, only one failed to reach the standard prescribed in the Order, viz :—specimen No. 155, a " Grade A (Tuberculin Tested) " milk, which was found to contain coliform organisms in 0·01 c.c., whereas they should have been absent in that amount. In spite of this default the total number of organisms per c.c. in this sample was only 1,900, a very low count. The average bacterial count of the other fourteen " Grade A (Tuberculin Tested) " samples was 7,523, the highest 36,000 and the lowest 210 per c.c. All the eight " Pasteurised " milks complied with the requirements of the Order, the average number of organisms per c.c. being 15,650.

One of the "Pasteurised" sold as ordinary milk contained 268,000 bacteria per c.c., but coliform organisms were absent from 1 c.c. The other contained 6,400 organisms per c.c. and coli were found in 0·1 c.c. The average count of the twelve ordinary milks was 65,717 per c.c., the highest 396,000 and the lowest 1,500. From the coliform standard the worst contained these bacteria in 0·0001 c.c. The sterilised sample again came near to living up to its name, as it only contained ten organisms per c.c. and coli were absent from 1 c.c.

As far as one is able to infer from the bacteriological examination of ordinary milk, as distinct from designated, I am led to believe that the milk business in the Borough is conducted with reasonable care as to cleanliness, etc. No examinations were made as to the sediment in any of the milk samples, but as dirt and bacteria are almost synonymous terms as far as milk is concerned, we may safely assume that where the bacterial count is low there is little dirt present, in other words, a low count shews a clean milk. The chemical examinations (*see* page 34) reveal that with few exceptions the milk supply of the Borough is above the standard laid down by the Sale of Milk Regulations, 1901.

Twenty-three samples of designated milk were sent to the Public Analyst for chemical analysis and one (a specimen of "Grade A (Tuberculin Tested)" milk) failed to reach the standard, as it contained only 2·96 per cent. of milk-fat in stead of not less than 3·0 per cent. The average contents of the remaining twenty-two designated milks were as follow :—

	MILK-FAT.	NON-FATTY SOLIDS.
"Grade A (Tuberculin Tested)" (fourteen samples)	3·98 per cent.	9·03 per cent.
"Pasteurised" (eight samples)	3·56 per cent.	8·82 per cent.

Preservatives, etc.

No legal proceedings were necessary under the Public Health (Preservatives, etc., in Food) Regulations, 1925 to 1927, as all official samples examined by the Analyst were found to be free from preservatives. An informal sample of sausages, however, was found to contain 220 parts per million of sulphur dioxide ; these should have been labelled preserved. As stated in a previous report, I think there is very little adulteration of food in Northampton.

No action was taken under the Artificial Cream Act, 1929, the Public Health (Condensed Milk) Regulations, 1923 and 1927, or the Public Health (Dried Milk) Regulations, 1923 and 1927.

Food Inspection

No change was made in the arrangements for food inspection, which include the inspection of meat, slaughterhouses, shops, stalls, and places where food is prepared or sold, which

have been working satisfactorily for many years. Tables 11, 12, and 13 (pages 86 and 87) give particulars of food condemned and are summaries of the reports submitted by the Medical Officer of Health at the monthly meetings of the Public Health Committee.

Grading and Marking of Foodstuffs

The inspectors continue to carry out the duties imposed by the Merchandise Marks Act, 1926, and the Agricultural Produce (Grading and Marking) Act, 1928.

Slaughter-houses

The number of slaughterhouses on the register is the same as in the previous year, viz :—fifty-four, of which forty-nine were registered or licensed before the adoption of Part III. of the Public Health Acts Amendment Act, 1890, and these cannot be easily got rid of. The remaining five are on yearly licences renewable each January.

The inspectors made 3,854 visits of inspection during the year, 3,619 being during the actual process of slaughtering. Thirty-six infringements of the bye-laws were discovered; these were of a minor character, chiefly of failure to white-wash at the proper time. All were remedied without having to resort to legal action.

Public Health (Meat) Regulations, 1924

These Regulations were made to enable meat inspectors to keep a closer observation on slaughtered animals, as they impose upon the butcher, amongst other things, the obligation of informing the Local Authority of intention to slaughter out of the usual hours. Three hours' notice must be given, except in case of accident. 209 notices were received during the year. No prosecutions were necessary, but several letters of warning were sent when breaches of the Regulations were discovered.

Disease in Meat

Table 14 (page 87) gives particulars regarding tuberculosis found in slaughtered animals. As in former years, calves and sheep only constitute a small proportion of the total findings, but 57·3 per cent. of whole and 97·8 per cent. of part carcases of beef and pork condemned were surrendered on account of being affected with tuberculosis. While it is right and proper that such meat should be condemned, I doubt if tuberculous meat even if consumed would be as dangerous as milk containing tubercle bacilli, seeing that meat is seldom consumed in the raw state, whereas milk frequently is.

Section 117 of the Public Health Act, 1875

Three seizures of unsound meat were made during the year, viz :—a head of pork shewing tuberculous glands was seized in a butcher's shop, having been brought from out of town the same morning. The inspector ascertained the names of two other butchers who had been supplied with pork from the same source and on visiting their premises he found pork offal

with signs of tuberculosis, and these were also seized. The total weight seized and condemned by a magistrate was 12 lbs. 6 ozs. and was presumed to be part of the same carcase. The matter was reported to the Executive Committee of the Public Health Committee with a view to legal proceedings being taken, but the Committee decided that letters of warning be sent to the occupiers of the three shops and to the butcher who supplied the meat.

All other meat condemned was either found by the inspectors at the time of slaughter or the inspector's attention was called to it by the butcher, who was willing to accept the officer's decision. The local butchers have amongst themselves an arrangement for contributing to a common fund out of which they receive compensation for diseased carcases or parts of such as are voluntarily surrendered, on the certificate of the inspector, and this has done much to help us in keeping the meat supply sound.

Bake-houses

At the end of December, 101 bakehouses were in use. The inspectors paid 272 visits of inspection and found thirty-seven infringements of the bye-laws (none of them very serious) the chief delinquency being a failure to whitewash at the proper time, viz :—every six months. All breaches of the Act were rectified on representation being made to the occupier.

Other Premises dealing with Food

Under this heading come premises other than those already mentioned where food is dealt with, including those connected with the manufacture and storage of potted meats, jams, sweets, ice cream, etc. The ice cream business, so far as it is carried on by small dealers under unsatisfactory conditions, has fallen on evil times of late years, as owing to bad seasons and the competition of large out-of-town firms conducting their business on scientific lines, a good many of the erstwhile little traders have had to retire. 1,311 visits of inspection were paid to these premises.

Food Poisoning

No case of suspected food poisoning was brought to the notice of the Department.

Bacterio-logical Work

No bacteriological examination of food (other than milk) was carried out, as none was required. The examination of milk was performed at the Pathological Laboratory of the Northampton General Hospital and at the Lister Institute of Preventive Medicine.

Chemical Work

All chemical analysis required by the Local Authority is performed by the Public Analyst to the Borough, Mr. A. Prideaux Davson, A.R.C.Sc. (Lond.), F.I.C., F.C.S., of Bermondsey.

Nutrition

No steps were taken for the dissemination of knowledge regarding nutrition and the relative values of foods.

Food and Drugs (Adulteration) Act, 1928

274 samples (including 103 informal) were taken under this Act by the sanitary inspectors and submitted to the Public Analyst. The nature of these samples is given in detail in Table 15 (page 88). Twenty (7·3 per cent.) were found not to be genuine. Nine of these were taken informally and consequently no legal action could be taken regarding them. The steps taken in the case of the eleven defaulting official samples (all milks) were as follow :—

No. 42 was deficient in milk-fat to the extent of 1·3 per cent. On instructions from the Executive Committee of the Public Health Committee a warning letter was sent to the vendor.

No. 127 was 3·3 per cent. deficient in milk-fat. The vendor was cautioned.

No. 142 shewed a deficiency in milk-fat of 1·0 per cent. Warned.

No. 169 was deficient in milk-fat to the extent of 18·0 per cent. Proceedings were stayed when it was learnt that a previous sample, taken by an officer of the Northants. County Council, direct from the cows, was found to be 17·9 per cent. deficient in fat. Three informal samples taken direct from the cows were found to be 5·3, 6·3, and 16·3 per cent. deficient in milk-fat. Two further official samples (Nos. 187 and 218) were taken and found to be 5·7 and 9·0 per cent. deficient in milk-fat respectively. These were followed by two more informal samples (one direct from the cows), which were 2·0 and 4·7 per cent. deficient in milk-fat. The Medical Officer of Health here wrote to the vendor telling him he must take steps to bring his milk up to standard and further samples would be taken. He was advised to get into touch with the experts at the County Council farm at Moulton, who would instruct him in feeding, etc. of his stock.

No. 171 was found to contain 1·3 per cent. of added water. Vendor was warned.

No. 173 contained 2·6 per cent. of added water and was 2·7 deficient in milk-fat. Proceedings were taken, but the case was dismissed, as the Bench were of the opinion the milk was sold in the same condition as it was when given by the cow.

No. 236 contained 14·8 per cent. of added water, but here again the Bench considered the milk had not been tampered with and the case was dismissed.

No. 237 was found to contain added water to the extent of 2·2 per cent. Cautioned.

No. 262 contained 7·4 per cent. of added water. Vendor was fined £1.

One sample of skim milk had a fat content of 0·42 per cent.

All milks submitted to the Public Analyst were examined for the presence of preservatives, but none were detected.

The average fat content of the 159 samples of genuine milk was 3·71 per cent. and the non-fatty solids 8·92 per cent. Some of these were designated milks (*see* page 31).

VI.—PREVALENCE OF, AND CONTROL OVER, INFECTIOUS AND OTHER DISEASES.

"Zymotic Deaths"

During 1931, twenty-two deaths were certified as due to the so-called "zymotic diseases," giving a "zymotic death-rate" of 0·24 per thousand living, as follows :—

	NUMBER OF DEATHS.	DEATH-RATE.
Diarrhoea (under two years)	7	0·08
Diphtheria	4	0·04
Enteric Fever	0	0·00
Measles	9	0·10
Scarlet Fever	0	0·00
Smallpox	0	0·00
Whooping Cough	2	0·02

Measles and Whooping Cough

These diseases not being notifiable under the Infectious Disease (Notification) Act, 1889, our knowledge of their incidence is not so complete as it is regarding the notifiable ones, but from the weekly returns furnished by head teachers of public elementary schools and information kindly supplied by Dr. Mason, the Assistant School Medical Officer, measles and whooping cough do not appear to have been very prevalent. Both are amongst the most highly infectious of common diseases and are endemic in all towns, but I do not think they have for many years existed in Northampton in such epidemic form as they frequently do in some of the industrial towns further north, where they often exact a big toll on infantile life. In one town about three times the size of Northampton one hundred deaths were attributed to measles during 1930. I think one of the reasons (and it may be the chief) for our escape from such a state of affairs is the comparative absence of slums and overcrowding in the Borough and the poverty which always goes with these conditions.

The number of cases of suspected measles reported was 698 and nine deaths were certified as due to that disease, giving a death-rate of 0·10 per thousand living, as against 0·08 for England and Wales. Two deaths were certified as due to whooping cough and sixty cases were recorded on the school returns. The death-rate was 0·02, compared with 0·06 for the country.

Owing to the few cases of complicated measles which occur in Northampton it has not been the practice to treat measles cases in Harborough Road Hospital, but in view of the small number of admissions for scarlet fever and diphtheria

and of the wish of the Ministry of Health that better provision should be made for the treatment of complicated cases of measles, it is proposed to admit such to the Isolation Hospital on the request of the parents or the medical practitioner in attendance.

Diarrhoea and Enteritis

Seven deaths were certified as due to these diseases in children under two years of age, giving a rate of 5·7 per thousand live births registered, as against 6·0 for England and Wales. As stated in former reports, these diseases do not figure so prominently amongst the causes of death as they did at the beginning of the present century.

Influenza

The year 1931 will not be known as an influenza year. I cannot remember hearing, or reading in the public press, less about influenza since the pandemic of 1918. Our records, however, disclose that there were twenty-three deaths classified to this disease, giving a death-rate of 0·25, compared with 0·36 for England and Wales. The deaths chiefly occurred during the months of February, March, and April.

Cerebro-spinal Fever

There were no notifications received, but a man aged thirty-four years was certified (after post-mortem examination) as having died from that disease, which is rare in Northampton.

Acute Polio-myelitis

One notification of acute anterior poliomyelitis (infantile paralysis) was received, referring to an illegitimate child, aged ten weeks. He was admitted to the General Hospital and made as good progress as could be expected and was later transferred to the Wellingborough Road Institution along with his mother. I am doubtful if the original diagnosis was a correct one.

Encephalitis Lethargica

Two cases of encephalitis lethargica were notified, but in my opinion the clinical evidence was not sufficient to justify the diagnosis in either of them. One, a woman aged fifty-seven, shewed marked signs of cerebral haemorrhage; this case ended fatally. The other was a child, aged eight years, who to all appearances made a complete recovery. In addition, a youth, aged seventeen, died from post-encephalitis lethargica after an illness lasting over three months.

Enterica

Nine cases (eight typhoids and one paratyphoid) were notified as suffering from enterica, but one of these was found to be a mistaken diagnosis and one was from the County but not notified previous to admission to the General Hospital, thus leaving seven Borough cases. One of the seven (the paratyphoid) was a nurse employed at the General Hospital the remaining six being residents of the Kingsthorpe end of the Town. Their ages ranged from just under five to nineteen years and all whose blood was examined suffered from typhoid.

The first of the Kingsthorpe group occurred in three boys, members of one family, living together at Green End, and these were all notified and removed to hospital on 24th July. Four days later two further notifications were received from the General Hospital, one relating to another Kingsthorpe boy who was admitted to that institution ten days earlier and the other a young woman residing in the old part of Kingsthorpe. On 6th August notification was received in connection with a boy, aged seven, living in a street off the Harborough Road. From the histories received and the clinical signs and symptoms, all these patients seem to have been infected about the same time, and the only thing common to all of them which might give rise to suspicion was the fact that all had consumed water from "Jubilee Well" on Kingsthorpe Green. It will be remembered that this water had been under suspicion in 1929 and 1930, but we were never able actually to prove it was contaminated, whilst at times it reached a high standard of purity. A sample was examined by the Bacteriologist on 28th July, *i.e.*, the day the second batch of cases was notified, when he stated—"Bacteriologically this is a very good sample of water." A sample taken at the same time was sent to the Public Analyst and was regarded as reasonably safe for drinking purposes. Not feeling satisfied or re-assured by these good bacteriological and chemical reports and suspecting that the trouble was only intermittent, we took another sample for bacteriological examination on 17th August, which shewed evidence of contamination. A further sample taken on 2nd September "still shewed evidence of contamination of the type present in the previous sample examined." Armed with this information the Local Authority applied to the magistrates for an order to close the well for twelve months under Section 70 of the Public Health Act, 1875. The application was granted and the well was closed by being diverted into the sewer. No hardship was caused to any person by the closure of the well as all the houses in the vicinity, which formerly obtained their supply from the "Jubilee Well," had the Town's supply laid on by order of the Council in 1930 and 1931, as mentioned in my last report, page 41. People non-resident in the Borough may wonder why, if the well was shewn to be so polluted at times as to be dangerous to health, it was only proposed to close it for twelve months; residents who followed the correspondence in the local press will understand the reason for this time limit. All the typhoid patients made uninterrupted recoveries and up to the time of writing we have had no further cases.

The attack-rate for the Borough was 0·10 and there were no deaths. For England and Wales the attack-rate was 0·06 and the death-rate 0·01.

Forty-two notifications of erysipelas were received, which Erysipelas

is ten less than in 1930. The attack-rate for Northampton was 0·45 and for England and Wales 0·38. Two deaths were attributed to this disease, one being in an unnotified person.

Chickenpox

Chickenpox is not at present notifiable in the Borough, so our knowledge of its incidence is not very complete. Over three hundred cases were reported from the public elementary schools. It is endemic and very little trouble is taken by many parents to prevent its spread. One death was ascribed to this cause.

Vaccination

The number of successful vaccinations performed in the Borough remains much the same from year to year. About ten per cent. of the infants born in the Town are successfully vaccinated. The great majority of the remaining ninety per cent. are excused from the operation owing to the parents obtaining an exemption certificate from the magistrates.

There is at present a movement afoot in medical circles to have compulsory vaccination abolished, but to retain facilities for optional vaccination for those who wish it. Some even go so far as to suggest more vaccinations would be performed under the voluntary system than under the so-called compulsory one. I do not think it would make much difference either way in a town like Northampton, where only some ten per cent. of infants are protected. There would probably be still fewer undergo the operation, but there will always be a certain percentage of the population who will seek protection from smallpox for their children and themselves through vaccination, and if the virulent type of smallpox comes amongst us there will probably be a rush for vaccination when it is too late. The voluntary system would be much more easily worked than the cumbersome method now in vogue.

As might be expected, the transfer of the Vaccination Officers and Public Vaccinators from the Board of Guardians to the Public Health Department did not increase the number of vaccinations performed. The three Public Vaccinators for the Borough are :—

Dr. E. Robertson, 220, Kettering Road ;

Dr. J. Cullen, 8, Langham Place ;

Dr. H. F. Percival, 2, Spencer Parade.

These officers cover for vaccination purposes the same areas they serve for medical out-relief.

The Medical Officer of the Wellingborough Road Institution also acts as vaccinator.

There are two vaccination officers, viz :—Mr. F. Taylor and Mr. R. Bennett.

In 1931, no vaccinations were performed by the Medical Officer of Health under the Public Health (Smallpox Prevention) Regulations, 1917.

Smallpox

There were eight cases of smallpox, whose ages ranged from seven to forty-nine years. Only one had been vaccinated, viz :—a man forty-nine years of age, vaccinated in infancy. The attack-rate was 0·09, compared with 0·14 for England and Wales.

The first cases, two children—brother and sister—aged nine and seven years respectively, occurred in January. Investigation shewed they had slept for one night at a house in Leicester, where smallpox was present, at Christmas, 1930. Though the father knew of the presence of smallpox in the house, he did not inform us the children were contacts (nor were the Leicester authorities informed) and it was not until one of them was found at the School Clinic to be suffering from smallpox that we were aware the disease was again in the Town. It is rather remarkable that though both children were at school while in an infective condition there was no spread to other scholars. The third case was the aunt of the above children, with whom she had been in contact before realising the nature of their ailment. The fourth was the daughter of No. 3, also a contact of Nos. 1 and 2.

No more cases occurred until the end of February, when a boy, aged seven, was found to be suffering from a mild attack of smallpox. He was removed to hospital and the family kept under observation, when seventeen days later his father, aged forty-nine, and brother, aged twenty-two, were found to be suffering from this disease, and five days later still his sister, aged ten, also fell with it. We were never able to discover where this outbreak originated, but as the disease was very prevalent in Leicester and the surrounding villages at the time, and considering the intercommunication between that city and Northampton, especially at week-ends, it is probable the infection was brought from that neighbourhood.

All were treated in the Smallpox Hospital at Hardingstone and made quick recoveries, the type of disease being very mild in every instance, which was not so in the 1928-1929 outbreak.

Scarlet Fever

165 notifications of scarlet fever were received (being fifty-four fewer than in 1930, and the smallest number for ten years) giving an attack-rate of 1·78, compared with 2·05 for England and Wales. Ninety-nine cases were removed to Harborough Road Infectious Diseases Hospital and fifteen of these were found, after a period of observation, not to be suffering from scarlet fever. Most of the admissions to hospital were of the mild type, so prevalent during recent years. There were few complications of a serious nature. One patient, aged nineteen, who had previously suffered from rheumatic fever, which had damaged the heart, had a recurrence of this condition—a not uncommon complication in such cases—and the heart was further damaged. On discharge she left the Town to reside in the north and the last time we heard from

her she was confined to bed with heart trouble. One child, aged seven, developed pneumonia with empyema and was removed to the General Hospital for operation. There were four cases of middle ear disease, but all cleared up before discharge.

The Ministry of Health are not so keen on the isolation of cases of scarlet fever in hospital as were their predecessors the Local Government Board. The type of disease has changed so much during the last twenty-five years, the need for actual nursing is not so great as formerly, but there is no reason to believe that a mild case of scarlet fever cannot pass on the disease to other members of the family, if not effectually isolated either at home or in hospital, and in many working-class families the former expedient is well nigh impossible. No case where the parents or the medical practitioner concerned desired removal was refused.

No deaths occurred from scarlet fever. The death-rate for England and Wales was 0·01.

Diphtheria

There were eighty-three notifications of diphtheria, which is less than a third of those received in 1930. The attack-rate for the Borough was 0·89 and for England and Wales 1·27. Seventy of the cases (including two transferred from the General Hospital) were removed to the Borough Infectious Diseases Hospital and eleven of them were found to be not suffering from diphtheria. Three were removed to the General Hospital owing to the possibility of tracheotomy being required. Two of these were subsequently transferred to the Borough Hospital to complete recovery, one after tracheotomy; the other did not require operation. The third of those admitted to the General Hospital died, the cause of death being "Septicaemia; septic broncho-pneumonia; acute tracheitis." There were four deaths due to diphtheria, giving a death-rate of 0·04, compared with 0·07 for England and Wales.

135 phials (508,000 units) of antitoxin for curative or preventive treatment were issued free to medical practitioners on application to the Public Health Department at a cost of about £26, this being in addition to the antitoxin used at the Isolation Hospital.

The marked reduction in the amount of diphtheria in the Borough during 1931, compared with its prevalence in 1930, has not been brought about by any extraordinary measures of prevention, such as artificial immunisation. It is merely the result of the periodic variation of the disease curve; in other words, our being in the trough instead of on the crest of the wave. It is sad to see children die when death could have been, and would have been, prevented had a sufficient dose of antitoxin been given in time. Diphtheria is not a painful disease and consequently it has often got a good hold

and has made much progress before parents are aware a child is ill and requires medical attention. I think it is a mistake more parents do not make a practice of examining children's throats, no matter what they complain of. It does not require much skill on the part of a parent to examine the throat (particularly if the child is well trained) and no expensive apparatus is required, only the handle of a spoon and a good light. It is often more difficult for a medical practitioner, a stranger, to get a good view of a nervous child's throat, and frequently by the time he has been called in irreparable damage has been done.

The incidence dropped more particularly in the latter half of the year and this happy state of affairs has continued until the present time (April, 1932). There was no diphtheria case in the Infectious Diseases Hospital from 17th August to 9th September, nor have we any at present.

Borough Hospitals

Harborough Road Infectious Diseases Hospital. A description of this hospital appeared last year, and further reference is made to it in this report, page 15. Table 17 (page 89) gives the statistics for 1931. The hospital was never half full during the year, the highest number of patients being thirty-seven on 13th and 14th January; nineteen of these were suffering from scarlet fever and eighteen from diphtheria.

Welford Road Tuberculosis Hospital. Reference should be made to pages 15 and 56.

Smallpox Hospital. As mentioned on page 39, eight cases were treated during 1931 and the hospital was open from 17th January to 27th March. Last year's report should be consulted for particulars as to accommodation, etc.

Wellingborough Road Infirmary. This institution is dealt with on page 15.

Pneumonia

143 notifications of pneumonia were received, which is twenty-two fewer than in 1930, and as with scarlet fever is the lowest for ten years. The attack-rate was 1·54. Forty-four were said to be broncho-pneumonia and nineteen were reported to be of influenzal origin. In addition, ten deaths were certified as due to pneumonia (either primary or influenzal) in persons not previously notified, bringing the total up to 153. As usual, the age of the patients varied considerably, the youngest being four months while the oldest was eighty-five years.

Fifty-three deaths were attributed to pneumonia, of which nine were certified as following influenza and twenty-two were ascribed to broncho-pneumonia, leaving twenty-two for all the other types, the chief of which was the lobar variety, probably the most fatal of acute illnesses in this country. The death-rate for all forms was 0·57.

Puerperal Fever

There were ten notifications of puerperal fever, two less than in the previous year, giving an attack-rate of 7·84 per thousand total births registered, compared with 3·55 for England and Wales. Two were doctors' cases; the rest occurred in the practice of midwives, with two exceptions which were institutional cases. All but one were treated in the General Hospital, where three ended fatally, two of the deaths being "outward transfers." In two instances the births were illegitimate.

Puerperal Pyrexia

We received nine notifications of puerperal pyrexia, nearly twice as many as in 1930. The attack-rate was 7·05 per thousand total births registered, as against 8·71 for England and Wales. Four were doctors' cases; the rest occurred in the practice of midwives. Four were treated in the General Hospital, all making good recoveries. One case also suffered from puerperal insanity. She was removed to the Public Assistance Infirmary, Wellingborough Road, and later was able to return home. In one instance the birth was illegitimate.

Ophthalmia Neonatorum

Eight notifications of ophthalmia neonatorum were received, all occurring in the practice of midwives. Three were illegitimates. Several were quite mild, but the three illegitimates were much more severe and required in-patient treatment at the General Hospital. Neisser's organism was present in the discharge from the most severe case, where, in spite of hospital in-patient treatment, an opacity of one cornea remains. All the rest except one seem to have recovered satisfactorily. (*See also* pages 47 and 72).

Venereal Diseases

139 residents of the Borough received treatment for the first time at the Special Clinic for venereal diseases at the General Hospital, under the combined scheme worked in conjunction with the County Councils of Northamptonshire and Buckinghamshire. The new cases were classified as follow :—

CONDITION.	MALES.	FEMALES.	TOTAL.
Syphilis	25	15	40
Gonorrhoea	43	7	50
Other than Venereal ..	27	22	49
Totals	95	44	139

From the returns furnished by the General Hospital it appears one syphilis and twelve gonorrhoea patients, including persons under treatment at the commencement of the year, carried out the full course of treatment recommended by the specialists in charge of the Clinic.

Five syphilis and twenty-five gonorrhoea patients ceased

to attend before completion of the course and the final tests were made. Anything short of the full course is unsatisfactory, to say the least of it. Half measures in venereal disease are useless, or perhaps worse, as they only lull the patient into a false sense of security whilst he or she still remains infective ; but, as I remarked in a former report, this class of patient is probably the most happy-go-lucky of all.

The total attendances made by Borough patients at the out-patient clinic were 4,950 and 141 days were spent in hospital by patients.

In the treatment of syphilis, 815 doses of one or other of the approved arsenobenzene compounds were administered. In connection with the scheme, 906 specimens were examined by the Pathologist at a cost of £191 9s. ; 654 specimens were on behalf of the Treatment Centre and 252 for local practitioners.

Tuberculosis

The work in connection with the anti-tuberculosis campaign has been carried on by the Tuberculosis Department on the lines which have been followed in the past. Towards the end of the year an X-ray apparatus was installed at the Tuberculosis Dispensary, Hazelwood Road, by Messrs. Schall & Son, Ltd., of London, at a total cost of just over £500. The object of the apparatus is to detect, if possible, the disease in its earliest stages, before the physical signs are sufficiently advanced to be discovered by other means. A second use for the plant, which had not been actually brought into use at the end of the year, is to observe the results of the treatment of phthisis by means of artificial pneumothorax, the apparatus for carrying out this treatment being a recent addition to the Dispensary.

The general outline of the scheme in operation in the Borough was given in my last report, pages 46 and 47. The tuberculosis death-rate in Northampton for 1931 was :— respiratory 0·75, other forms 0·15, giving a total rate of 0·90, which is 0·06 above the figure for 1930. The rate for England and Wales in 1931 was 0·89 (respiratory 0·74, other forms 0·15). As mentioned in previous reports, we must be prepared for slight fluctuations of the rate from year to year.

In his interesting report (Appendix I., pages 51 to 63), Dr. Laughton emphasises the value of prevention in anti-tuberculosis work. If the axiom, " Prevention is better than cure," be true in any department of medicine it is doubly true regarding tuberculosis, for, as Dr. Laughton says, the cure in this disease is in the majority of cases only a partial one and that often of short duration. If there is to be any semblance of cure or arrest, the disease must be attacked in its earliest stages.

In the campaign against tuberculosis all are required to " do their bit " if the fight has to be won—the patient and his

friends, the general practitioner, and the Local Authority acting through the Medical Officer and Tuberculosis Officer; the patient must consult his doctor on the appearance of the first suspicious signs or symptoms pointing to consumption, and these are now so well known to the general public that no excuse can be taken for disregarding or ignoring them. Again, the medical practitioner when consulted by such a patient must regard the matter as most urgent, and if in any doubt as to the diagnosis he can call in the Tuberculosis Officer for his opinion, when the case will be examined by the latest methods, and, if necessary, admitted to an institution for a period of observation. The case having been found to be one of tuberculosis, the Tuberculosis Officer will advise as to the appropriate treatment to be followed and it is up to the patient to carry out this advice whether at home (domiciliary treatment under his or her own medical practitioner with occasional visits to the Tuberculosis Officer at the Dispensary), or if residential treatment in an institution is considered necessary by the Tuberculosis Officer he will advise this being carried out, either at Welford Road Hospital or at a sanatorium, probably Creaton, the cost in these cases being defrayed by the Local Authority. It is a mistake to suppose all cases are suitable or require institutional treatment. Again, there is a wide difference between sanatorium treatment, in the true sense of the word, and hospital treatment. A case may not be at the time of examination fit for the sanatorium, but after a period of rest, etc., in hospital it may improve so much (and frequently does as shewn by Dr. Laughton's report) as to be fit to pass on to the sanatorium, but whatever the result of sanatorium treatment may be it falls short of the ideal result of prevention, and it will ultimately be found the best results from every point of view will be attained by prevention as distinct from treatment. It is for this reason so much stress is laid on taking advantage of the means which tend to increase the immunity (resisting power of the body) to tuberculosis, such as the taking of regular exercise in the open air, the keeping of regular hours, and the consumption of sufficient food of the right kind, the avoidance of alcohol and overcrowding, etc. Where it is possible to carry out these rules, tuberculosis seldom obtains a footing.

Some years ago (in 1924) I gave it as my opinion that pulmonary tuberculosis in children of school age is a rare condition in spite of many having been notified in the past. The great majority of these children were not suffering from tuberculosis but from some other abnormality of the lungs, or in many cases from no disease of the lungs, tuberculous or otherwise. This view is now held by many tuberculosis officers, including those with the widest experience, *i.e.*, those through whose hands pass the greatest number of children, the officers of the London County Council. In the same way the idea of

the " pre-tuberculous " child is also changing, as at last it is recognised that the " pre-tuberculous " child does not develop into the tuberculous adolescent. It is much more common to find the tuberculous adolescent with a history of good (in fact robust) health whilst at school, and for some years after leaving, than to find he or she was amongst the so-called " pre-tuberculous." In other words, it is commoner to find the athlete than the so-called " pre-tuberculous " amongst these adolescent phthisis cases. Why these young people break down during early adolescence is not known, but one fact about them is beyond doubt, viz :—that the prognosis is extremely grave.

Cancer

In my report for 1930, a summary of the cancer position in Northampton was given, together with figures relating to the disease for the past forty years. It will be remembered that the number of deaths attributed to cancer had been on the increase for many years and in 1930 (the year covered by the report) the cancer death-rate for the Borough reached its highest figure, 1·78, against 1·45 for England and Wales. The number of deaths certified as due to cancer in 1931 was 148, giving a death-rate of 1·60, while for England and Wales it was 1·48.

No special work has been undertaken in connection with cancer, as it is felt the General Hospital, with its medical and surgical specialists and large out-patient department, is more fitted for such work.

Bacteriology

The usual table giving particulars of clinical bacteriology will be found on page 90. The general arrangements for bacteriological work were outlined on page 12 of last year's report.

Disinfection

Table 18 (page 89) shews the number of articles stoved each month at the Disinfecting Station, St. Andrew's Road.

For some time I have felt that the procedure followed in Northampton with regard to disinfection of premises after a case of notifiable infectious disease has occurred is out of date, *i.e.*, it does not rest on modern scientific knowledge in so far as the requiring of the stripping of walls and whitewashing the ceiling of the room where a case of illness had been nursed. I think this procedure dates back to the early days of the germ theory of disease, *i.e.*, to the beginning of the science of bacteriology, when, if observers were very keen, they were not so experienced in the behaviour of bacteria outside the body as they are to-day. It was formerly thought the germs of scarlet fever and diphtheria could and would live for a long time on the wallpaper or the ceiling of a room, or on the furniture and other inanimate objects, and give rise to other cases of the disease. Experience does not bear out these views and we now

know that it is not by these means that infectious diseases are spread, but by droplet infection, *i.e.*, by personal contact with the sick. When the sick person has recovered or been removed to the Isolation Hospital, the danger of spread has disappeared. On these grounds the Public Health Committee has decided that the stripping of walls and whitewashing of ceilings after the occurrence of infectious disease should be discontinued. Bedding, etc., used by the patient will be removed and disinfected as formerly, as these articles are likely to have been infected and though washing, especially if accompanied by boiling, would do all that steam disinfection can perform, we are never sure this will be carried out in all cases by the patient's relatives. Soap and water if properly used are as effective as a chemical disinfectant.

VII.—MATERNITY AND CHILD WELFARE.

General Remarks

The eleventh annual report of the Assistant Medical Officer for Maternity and Child Welfare on the work of that Department will be found in Appendix II., pages 64 to 77, and is on the same lines as its predecessors.

Infant Mortality

The infant mortality-rate was 70·6 per thousand live births registered, which is the highest figure touched for the past ten years. The rate for England and Wales rose from 60 in 1930 to 66 in 1931, and this is the first occasion since 1915 that the rate for the Borough has exceeded that for the country. Nevertheless, this relatively high rate locally must be a source of disappointment to all workers in the infant welfare cause, following as it does a series of very low figures, remarkably low for an industrial town. To what is this rise due ?

As usual, the first place amongst the causes of death is taken by prematurity. When we have discovered a means of reducing premature births we shall have made another great advance in the saving of infantile life.

Dr. Bebbington calls attention to the fact that very few of the infants who died before reaching the age of one year attended one of the eight infant welfare centres. From Table D at the end of this volume it will be noticed nearly half of the babies who died under one year did so before the end of the second week of life. The higher infant death-rate for 1931 is doubly disappointing, as during the year the Northampton Maternity and Infant Welfare Voluntary Association was awarded the second place in competition for the Astor Shield and in consequence became the holders of the Kettering Shield, presented to the runners-up. Every opportunity must be taken of advising and encouraging expectant mothers to attend the ante-natal clinics and to bring their infants to the centres after birth, so that they may be instructed and helped in the saving of these infant lives.

Artificial Sunshine

The ultra-violet ray (Hanovia Alpine Sun) lamp has been in more or less regular use during the year. Thanks to the kindness of the General Hospital authorities all our health visitors received a course of training at the hospital in the use of ultra-violet rays and are now able to operate the lamp at the Central Building, thus freeing Dr. Bebbington for other work. The most beneficial effects of artificial sunlight treatment, so far as infants are concerned, seem to be in the cure of rickets, especially if applied early in the disease.

Manfield Orthopaedic Hospital

The Maternity and Child Welfare Committee still retains four beds at this hospital, chiefly occupied by cases of rickets or congenital malformations. Four beds appear to be ample for our needs, for though they were fully occupied during the year there was never a large waiting list.

Maternity Homes

As already mentioned on page 16, at the end of 1931 there were seven nursing homes on the register, viz :—three maternity, one mixed, and three medical or surgical for aged and infirm persons.

A meeting was held at the headquarters of the Queen's Institute of District Nursing, at which representatives of the County and Borough Maternity Committees were present, to discuss the possibility of the Queen's Institute building a maternity home with the help and support of the County and Borough Councils. While no definite promises could be given, both local authorities viewed the matter very sympathetically. No further steps had been taken by the end of the year.

Ophthalmia Neonatorum

As the great majority of persons who are said to have been blind from birth are suffering from loss of sight due to ophthalmia neonatorum, it requires no stretch of imagination to realise how important this disease is and how every effort should be made to prevent its onset after birth. This can nearly always be done if sufficient care is taken to treat the eyes immediately after birth. Once the disease has made its appearance it should be energetically treated by a professional man or woman ; if due to Neisser's organism, specialist treatment at the General Hospital is urgently called for. Unfortunately, it is just in those cases where the gonococcus is present that everybody around the infant appears to be the most helpless and shiftless, with the result the sight is frequently damaged or destroyed. (*See also* pages 42 and 72).

Maternal Mortality

All maternal deaths occurring in the Borough are investigated, according to the requirements of the Committee appointed by the late Minister of Health to advise on maternal mortality, and the result of each inquiry is forwarded to the Ministry.

All notified cases of puerperal fever and pyrexia are investigated by the Assistant Medical Officer for Maternity and Child Welfare.

Circular 1167 and Memorandum 156/M.C.W. were considered by the Maternity and Child Welfare Committee, with a view to improving the local service on the lines suggested in the Memorandum, and the following action was taken :—

1.—Walter Salisbury, Esq., M.D., F.R.C.S., was appointed as surgical consultant.

2.—Sterilised maternity outfits are to be provided free to necessitous cases approved by the Assistant Medical Officer for Maternity and Child Welfare.

3.—The ladies of the Voluntary Association working in conjunction with the Statutory Committee are to give assistance in providing home helps where these are considered to be desirable or necessary.

4.—All general practitioners in the Borough were circularised :—

(*a*) asking them to discourage the employment of handywomen at confinements ;

(*b*) acquainting them of the appointment of a consultant obstetrician ; and

(*c*) calling attention to the desirability of impressing on their patients the importance of ante-natal examinations, giving them the time clinics are held at the Central Building, Dychurch Lane.

These steps were approved by the Minister of Health. Most, if not all, of the other suggestions contained in the Memorandum were already being carried out in Northampton.

It is probably too early as yet to say what has been the effect of the large amount of work and research which has been performed in this country during the last two years in connection with maternal mortality. Several years with a downward trend will have to persist before we can be sure we are on the right track. There appears to be some factor present, little understood, which determines the onset of the dread puerperal sepsis. The deaths from other causes associated with pregnancy seem more amenable to prevention by a better all round maternity service and even this cannot be brought about in a single year.

In his Annual Report for 1930, the Chief Medical Officer to the Ministry of Health mentioned Northampton as one of the towns with a high maternal mortality-rate, though more favourably circumstanced than industrial towns in Lancashire and Yorkshire. In other words, Northampton is, or was, one of the black spots. It behoves all who have the welfare of the Town at heart to do all in their power to reduce maternal mortality by inducing expectant mothers to take advantage of the help and advice offered them by the Maternity and

Child Welfare Committees, both Statutory and Voluntary.

There were five maternal deaths in Northampton in 1931 —four from puerperal sepsis and one from other puerperal causes—giving a maternal mortality figure of 4·05 per thousand live births registered (sepsis 3·24, other causes 0·81). The corresponding figures for England and Wales were 4·11 (sepsis 1·66, other causes 2·45).

It is really more accurate to calculate the maternal mortality in proportion to every thousand total births, *i.e.*, live births and stillbirths registered. Expressed in this way the figure for Northampton last year was 3·92 and for England and Wales 3·95. The ideal method, of course, would be to base the figures on the number of women exposed to the risk of dying from puerperal conditions.

Health Visiting

Children aged one to five years, commonly called "toddlers," are visited in their homes by the health visitors as part of their routine work. Mothers are also asked to bring children of this age with them to the welfare centres. In view of the importance lately attached to the supervision of children of pre-school age, the health visitors are instructed to pay extra attention to them. So far as one can see, this part of the work appears to be efficiently carried out.

Children Act, 1908

As stated in my last report, the supervision of infants and children under Part I. of the Children Act, 1908, was definitely transferred from the Guardians to the Maternity and Child Welfare Committee by the coming into force of the Local Government Act, 1929, the health visitors being appointed infant life protection visitors. The duties to be performed under this Act consist of keeping the register of children under the age of seven years who are being maintained for gain or reward by persons other than relatives, and the regular visitation of these children in their homes, together with inspection of the premises. A few words on these matters may not be out of place here. For homeless children, orphans, unwanted illegitimates, etc., I think the best place is a home with a private family as visualised in the Children Act if (and it is sometimes a big "if") a suitable place can be found. All the people who take in children for gain or reward are not suitable for that work. During the year I had to have two children (one over seven) removed from the custody of a couple and give notice to them to cease receiving children under the Act or proceedings would be taken. I took these steps on moral grounds. These children had had four sets of foster-parents before the above incident happened. Again, there is too much changing of these foster-parents. It cannot be good for children to have to change their foster-parents or guardians so frequently. When the right persons are found the children

should remain with them until the latter are able to look after themselves. I feel very strongly on this point. At the end of the year, there were forty-six children on the register and these were being maintained in thirty-nine separate homes.

See Appendix III. (page 78) for the usual statistical tables in connection with the Medical Officer of Health's report.

Appendix I. (page 51) deals with the work of the Tuberculosis Department and Appendix II. (page 64) with the Maternity and Child Welfare Department.

APPENDIX I.

REPORT OF THE CLINICAL TUBERCULOSIS OFFICER FOR THE YEAR 1931.

TUBERCULOSIS DISPENSARY,
MARCH, 1932.

To the Medical Officer of Health and Chief Tuberculosis Officer.

SIR,

I beg to submit herewith my report on the anti-tuberculosis scheme for the year 1931.

Your obedient Servant,

N. B. LAUGHTON.

Notifications

During the year 144 cases were notified as suffering from tuberculosis. Of these, 115 were pulmonary and 29 non-pulmonary. The corresponding numbers notified in these two groups in the previous year were 109 and 21 (*i.e.*, a total of 130). The classification of new cases is given in detail in Table T1 (page 58).

In the next table is given the duration of illness of those notified with pulmonary disease. This, of course, can be only a rough estimate at the best, for it is impossible to give with exactness the duration of a complaint which has so often an insidious beginning.

Table T8 (page 63) shews the age groups for new cases and deaths, and it will be noted that the incidence of lung disease was highest for females in the 20-25 year period, and for males in the 25-35 year period. One case of interest was that of a man notified with pulmonary disease at the age of 84.

Deaths

The number of deaths, and the death-rates from tuberculosis per thousand of the population in 1931, are tabulated below :—

RESPIRATORY.		OTHER FORMS.		TOTAL.	
NO.	RATE.	NO.	RATE.	NO.	RATE.
70	0·75	14	0·15	84	0·90

The death-rate for pulmonary disease is nearly the same as in the previous year ; that for all forms shews a small increase due chiefly to a greater occurrence of tuberculous meningitis. The death-rate in 1930 was considerably below that of the average for county boroughs, and it is likely that the figure for 1931 will again compare well with others.

Of those cases which died during the year from pulmonary tuberculosis, 41 per cent. did so within one year of notification. This proportion is an ominous one, yet it is 14 per cent. below the average for the past ten years. The figure varies a good deal from year to year, and the present one can be regarded as no more than a favourable feature of this particular period, and not as indicating a downward trend.

The Value of Prevention

The value of preventive work in attacking the mortality from tuberculosis cannot be over-emphasised, and it should be regarded always as more important than treatment because it is more productive. There is every reason to believe that by taking adequate precautionary measures the lives of contacts of infectious cases may be greatly insured against acquiring the disease. Economically a life so saved represents the highest possible return for municipal and personal effort. But as good health is a blessing which is not fully appreciated until it is lost, and as these cases cannot be specified in particular, they come under no limelight and enter no record. Sanatorium and hospital treatment, however satisfactory in their results, can do no more in the majority of cases than restore to partial health and working capacity, with a comparatively poor expectation of life.

The obvious remedy is firstly, to take steps to reduce as far as possible the risks of infection, especially amongst the close associates of a tuberculous patient, and secondly, to obtain notification and treatment at the earliest stage of the disease, so as to secure the maximum prospect of life, the fullest return to capacity, and the least expenditure on treatment.

Delay in Notification

One is frustrated in the second of these endeavours chiefly by delay in seeking advice. Cases have occurred in the past year in which patients with typical symptoms of active tuberculosis over a long period have refused to have medical help until a week or two of their deaths. In the case of certain infective conditions, and particularly in this disease, the practice of " sticking it out " as long as possible before seeking advice and treatment deserves condemnation, not commendation, from the public that suffers serious consequences from such mis-directed perseverance. The plea of ignorance cannot be maintained in every case, for it occurs frequently in families in which the fatal results of delay have been exemplified tragically in the case of one or more members on an earlier occasion. A patient often has active disease with a heavily infected

sputum for months before the condition comes to notice. The menace to his house " contacts " is proportional to the time they are exposed to massive infection, and to the housing and hygienic circumstances. In 1931 there was a definite evidence of the existence of house infection in more than half of those cases in which the disease was definitely considered to be tuberculous. It is the routine practice at the Dispensary to examine as many as possible of the close contacts of new cases, to inform them of the earliest indications of disease, and the necessity of seeking immediate advice should any suspicious symptoms arise at a later period. Individual warning of this kind, though much of it seems futile, is likely to be more effective than general propaganda. A record is now maintained of " tuberculous households," so that touch may be kept with those contacts who, because of heavy exposure to infection or some other reason, are likely to provide many of the new cases of the future.

To combat the forces of tuberculosis effectively it is therefore necessary to meet them on a wide front and anticipate the attack. The household is the unit of infection, and the household should be dealt with in a preventive scheme.

The Patient

For the patient there is the necessity of isolation and treatment, usually in hospital or sanatorium, where at the same time he learns to live as will best maintain his health, and to reduce to a minimum the risk to those living with him. The fundamental value of prolonged rest as the basis of recovery has to be realised. It is sometimes argued that this would not be tolerated for long by patients who feel fit enough to move about, but one's experience has been that they soon learn to appreciate the benefit and the necessity of it, and co-operate well in the slow spade-work of making the foundation of health as sound as possible. Occasionally too, after many months of complete rest and patient waiting, the reward comes to a case which gave scant hope of recovery. The progress of a hospital patient depends much upon his mental make-up, as the maintenance of his health after he is discharged depends much upon the intelligent application of what he has learned to the circumstances in which he is placed.

The Contacts

For the household contacts there is the requirement of healthy living, so that the seed of the disease may not have the strength to germinate owing to the high resistance of a healthy body. Ample fresh air is called for, and in this connection might be mentioned the detrimental effect of overclothing, especially in the summer months, which seems to be so rife in the cases of men and children. Sufficient nourishment to maintain good nutrition is needful.

Housing

The importance of good housing was commented upon in the last annual report, and may be emphasised again. The official designation of "overcrowding" may not apply to a house, but the occurrence of a case of pulmonary tuberculosis may render it definitely applicable when the important question of isolation is considered.

An investigation of patients living in Council houses in December, 1931, shewed that these numbered 73. About two-thirds of them were pulmonary cases, and, as already stated, the positive but unrecorded benefits to household contacts must not be forgotten, for it may mean the saving of useful lives and of costly expenditure in treatment. In patients who had moved into these houses, one has frequently noticed a brighter and more optimistic outlook, which in itself is highly beneficial. A practice which has been adopted by one or two authorities, and which seems a very commendable one, is to make the granting of municipal houses to tuberculous persons conditional upon their satisfactory co-operation in such treatment and supervision as is advisable for the welfare of themselves and the community, *e.g.*, in the matter of examination of patients and families when required, and the reasonable exercise of precautionary measures in the home.

Revision of Register

Under the Public Health (Tuberculosis) Regulations, 1930, the names of forty-three notified persons were removed from the register in 1931, made up as follows :—

(*a*) Thirty in which the diagnosis had not been established, and

(*b*) Thirteen in which the patient had attained a condition which might be regarded as recovered.

Particulars of cases thought to be suitable for deletion were submitted to the Medical Officer of Health, who obtained the assent of the practitioner notifying or at present in charge, where possible.

On 31st December, 1931, there were 533 cases on the Medical Officer of Health's register, 374 being pulmonary and 159 non-pulmonary.

Park Workers

At the end of 1931, twelve men and six women were employed under the scheme for tuberculous patients. With only one or two exceptions they were able to continue at their work throughout the year.

Tuberculosis Dispensary

The work at the Dispensary shewed an increase in certain respects over that of 1930. The number of attendances and the number of individuals examined were considerably greater. 225 examinations of "contacts" were made as against 145. More patients were examined at the request of general practitioners. The bacteriological examinations were more numerous.

The work carried out is summarised below :—

Attendances :—

Total number of attendances of patients, etc.		1,307
Number of patients, etc., attending :—		
Males	291	
Females	248	
	——	539

225 examinations of "contacts" were made, and of the 172 individuals examined 3 were subsequently notified. 177 examinations were made at the request of general practitioners for diagnosis, and of the 82 persons examined 23 were subsequently notified. These figures are included in the above totals.

The average number of attendances per patient was 2·4.

In addition to examinations at the Dispensary, the Tuberculosis Officer made 207 visits to the homes of patients, either at the request, or with the permission, of general practitioners.

The visits made by the nurse from the Dispensary were :—

Number of investigations after notification in the case of :—		
Pulmonary Tuberculosis	95	
Other Forms of Tuberculosis	21	
Deaths from Tuberculosis	1	
	——	117
Re-visits, etc.		1,206
Total		1,323

568 specimens of sputum, urine, etc., in connection with 451 cases or suspected cases, were examined at the bacteriological laboratory attached to the Dispensary ; 108 were found to be positive and 460 negative.

X-ray Plant

Early in the year it was decided to provide the Dispensary with an X-ray plant, and this was installed by Messrs. Schall & Son in December. It will assist very materially in diagnostic work, especially in the detection of disease in an early stage, and in the elimination of those conditions which clinically simulate tuberculosis.

Residential Treatment

Reference may be made here to Table T7 (page 62), which shews the disposal of notified cases of pulmonary tuberculosis. A satisfactory feature is the decline in the number who, having been advised to have residential (sanatorium or hospital) treatment, refused to take advantage of the offer. The figures for the past four years are as follow :—

1928	32 per cent.
1929	28 per cent.
1930	24 per cent.
1931	15 per cent.

This seems to indicate an increasing willingness to accept the benefits of what is usually the best and quickest route to recovery. If a patient takes the step with hesitation, he is, in all but rare instances, soon convinced of the wisdom of his decision.

Welford Road Hospital

The following are the statistics with reference to patients treated at Welford Road Hospital :—

	MALES.	FEMALES.	TOTAL.
Remaining at end of 1930	8	4	12
Admitted during 1931	23	26	49
Discharged during 1931	19	15	34
Died during 1931	4	2	6
Remaining at end of 1931	8	13	21

Of the 49 cases admitted, 38 were insured persons. All were admitted for isolation and treatment.

Condition on discharge :—

Quiescent	6
Much Improved	14
Improved	6
In Statu Quo	6
Worse	2

The number of patients treated at Welford Road Hospital was practically the same as in 1930. Considering those discharged, it is satisfactory to note that over three-fourths of them left the hospital quiescent or improved, and twenty-nine per cent. of them were transferred to Creaton Sanatorium. The average duration of their stay in hospital was 136 days, or roughly $4\frac{1}{2}$ months. Their weight records are interesting. In five cases none were available. Of the remainder (29) none lost weight, and the average gain was over 17 lbs. The most gained was 42 lbs.

The need for single-bedded wards at the hospital has long been felt, and it was decided to erect four of these, two on the male side and two on the female. The work was commenced towards the end of the year.

Creaton Sanatorium

Below are the data with reference to the patients treated at Creaton Sanatorium :—

	MALES.	FEMALES.	TOTAL.
Remaining at end of 1930	9	6	15
Admitted during 1931	18	11	29
Discharged during 1931	17	12	29
Remaining at end of 1931	10	5	15

Condition on discharge :—

Quiescent	9
Much Improved	8
Improved	9
In Statu Quo	2
Declining	1

The beds at the sanatorium remained well occupied throughout the year. The excellent results of treatment are indicated by the fact that 90 per cent. of those discharged were considered to be quiescent or improved.

Manfield Orthopaedic Hospital

Particulars of cases treated at Manfield Orthopaedic Hospital are as follow :—

	MALES.	FEMALES.	TOTAL.
Remaining at end of 1930	5	8	13
Admitted during 1931	3	1	4
Discharged during 1931	5	6	11
Remaining at end of 1931	3	3	6

Condition on discharge :—

Quiescent	9
Improved	1
Declining	1

The lesions treated in these cases were those of the spine, knee, hip, and sacro-iliac joint.

Other Institutions

Cases treated at other institutions were as follow :—

	MALES.	FEMALES.	TOTAL.
Remaining at end of 1930	1	—	1
Admitted during 1931	2	1	3
Discharged during 1931	1	1	2
Remaining at end of 1931	2	—	2

In the treatment of these cases the following institutions were made use of :—

St. Anthony's Hospital, Cheam, Surrey ;
Eversfield Chest Hospital, St. Leonards-on-Sea ;
International Factory Clinic, Leysin, Switzerland ; and
King Edward VII. Sanatorium, Midhurst.

In addition, three went privately to the Royal National Hospital, Ventnor ; one to the Royal National Sanatorium, Bournemouth ; and one to the London Temperance Hospital.

Public Health Act, 1925

There was no case of compulsory removal to hospital under Section 62 of this Act.

Public Health (Prevention of Tuberculosis) Regulations, 1925

It was not necessary to take any action under these Regulations, which deal with tuberculous employees in the milk trade.

Table T1. Northampton, 1931.

Tuberculosis. Classification of New Cases.

Classification.	Notified Cases.			Deaths of Cases not Notified.		
	M.	F.	Total.	M.	F.	Total.
Pulmonary :—						
Lung and Pleura	62	51	113	2	—	2
Larynx	1	1	2	—	—	—
	63	52	115*	2	—	2*
Meninges and Brain	4	5	9	2	—	2
Peritoneum and Intestines	2	3	5	—	—	—
Bones and Joints	4	4	8	—	—	—
Cervical Glands	4	1	5	—	—	—
Other Organs	1	1	2	2	—	2
Totals	78	66	144	6	—	6

*A total of 117 fresh cases of pulmonary tuberculosis.

Table T2. Northampton, 1931.

Pulmonary Tuberculosis Investigations. Duration of Illness.

Period.	Notified Cases.	Deaths of Cases not Notified.	Total.
Under 6 months	19	—	19
Over 6 months and under 1 year	17	—	17
Over 1 year and under 2 years ..	19	—	19
Over 2 years and under 3 years	15	—	15
Over 3 years and under 4 years	11	—	11
Over 4 years and under 5 years	5	—	5
Over 5 years	19	—	19
Unascertained	10	2	12
Totals	115	2	117

Table T3. Northampton, 1931.

Pulmonary Tuberculosis Investigations. Sex and State.

	MALES.	FEMALES.	TOTAL.
Single	23	28	51
Married	33	20	53
Widowed	2	2	4
Unascertained	7	2	9
Totals	65	52	117

Table T4. Northampton, 1931.

Pulmonary Tuberculosis Investigations. Degree of Home Isolation Found.

	MALES.	FEMALES.	TOTAL.
Number having separate Bedrooms	19	20	39
Number having separate Beds (only)	4	5	9
Number having no Isolation	33	22	55
Number in Institutions	5	1	6
Unascertained	4	4	8
Totals	65	52	117

Table T5. Northampton, 1931.

Tuberculosis Deaths. Period elapsing between Notification and Death.

Period between Notification and Death.	Males.	Females.	Total.
(1) Pulmonary Tuberculosis :—			
Not notified	1	—	1
One month	5	4	9
1—6 months	5	11	16
6—12 months	2	1	3
12—18 months	3	3	6
18—24 months	4	3	7
2—3 years	3	3	6
3—4 years	3	5	8
4—5 years	2	2	4
5 years and over	5	5	10
Totals	33	37	70
(2) Tuberculosis other than Pulmonary :—			
Not notified	4	—	4
One month	5	4	9
6—12 months	—	1	1
Totals	9	5	14

Table T6. Northampton, 1931.

Pulmonary Tuberculosis. Occupational Incidence and Mortality.

OCCUPATION.	New Cases.	Deaths Registered	OCCUPATION.	New Cases.	Deaths Registered
Shoe Operatives :—					
(*a*) Clicker	4	4	Leather Chemist	1	1
(*b*) Laster	3	1	Leather Dresser	1	—
(*c*) Finisher	7	3	Leather Dresser's Manager	—	1
(*d*) Roughstuff and Pressman	3	2	Leather Machine Worker	—	1
(*e*) Warehouse and General	10	5	Leather Sorter	1	1
(*f*) Female Worker	13	7	Leather Traveller ..	—	1
	40	22	Leather Warehouseman	1	—
			Milk Roundsman ..	1	1
Barmaid	1	—	Motor Driver	2	1
Barman	1	—	Optician (Assistant)	—	1
Blouse Packer	1	1	Pedlar	—	1
Book Canvasser	1	—	Publican	1	—
Cafe Proprietor	1	—	Railway Wagon Greaser	—	1
Carpenter	2	—	Road Sweeper	1	—
Celluloid Worker ..	2	—	Samples Porter	1	—
Clerk	8	2	Schoolchild	3	—
Companion-help	1	—	Shop Assistant	5	—
Confectioner	1	—	Stationer	1	—
Corn Merchant	1	1	Surgical Instrument Maker	—	1
Corporation Park Attendant	—	1	Tailoress	1	—
Domestic Servant ..	4	2	Veterinary Surgeon	1	1
Draughtsman	1	1	Waitress	—	1
Electrician	1	—	Wood Last Maker ..	—	1
Engineer	1	—	No Occupation	3	2
Fancy Leather Worker	1	—			
French Polisher	1	—			
General Shopkeeper	—	1			
Housekeeper	1	—			
Housewife	16	21			
Ice Cream Vendor ..	1	—			
Insurance Agent	1	—			
Labourer	5	1	Totals	117	70
Laundrymaid	—	1			

Table T7. Northampton, 1931.

Pulmonary Tuberculosis. Disposal of Notified Cases.

CLASSIFICATION.	NUMBER.	PER CENT.
Received Residential Treatment :—	72	62·1
At Creaton Sanatorium 21		
Welford Road Hospital 30		
Both Creaton Sanatorium and Welford Road Hospital 10		
Union Infirmary 3		
Royal National Hospital, Ventnor 3		
General Hospital 3		
King Edward VII. Sanatorium, Midhurst 1		
London Temperance Hospital 1		
Refused Residential Treatment	13	11·3
Too ill for removal	9	7·9
Residential Treatment not considered necessary	9	7·9
Not suitable for Residential Treatment	4	3·6
Not seen (at request of doctor or patient)	4	3·6
Left the area soon after notification	2	1·8
Died before receipt of notification	1	0·9
Making own arrangements for treatment	1	0·9
Totals	115	100·0

Table T8. Northampton, 1931.

Tuberculosis. Age Groups for New Cases and Deaths.

Age Periods.	New Cases.				Deaths.			
	Non-Pulmonary.		Non-Pulmonary.		Pulmonary.		Non-Pulmonary.	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year	—	—	2	1	—	—	2	1
1–5 years	—	—	4	3	—	—	2	2
5–10 years ..	1	—	4	3	—	—	2	1
10–15 years ..	1	2	3	1	—	1	2	—
15–20 years ..	4	9	3	1	2	4	—	1
20–25 years ..	10	14	—	2	2	5	—	—
25–35 years ..	20	11	1	1	10	10	—	—
35–45 years ..	10	10	1	1	6	9	1	—
45–55 years ..	10	5	—	1	8	6	—	—
55–65 years ..	8	—	—	—	4	1	—	—
65 and upwards	1	1	1	—	1	1	—	—
Totals	65	52	19	14	33	37	9	5

See also remarks of Medical Officer of Health on pages 43 *to* 45.

APPENDIX II.

REPORT OF THE ASSISTANT MEDICAL OFFICER FOR MATERNITY AND CHILD WELFARE FOR THE YEAR 1931.

To the Medical Officer of Health.

SIR,

I beg to submit herewith my report on the maternity and child welfare work in the Borough for the year 1931.

Your obedient Servant,

E. F. BEBBINGTON.

INFANT WELFARE CENTRE,
DYCHURCH LANE,
MARCH, 1932.

General Arrangements

The general arrangements for the Department are unaltered. There is one Assistant Medical Officer, five health visitors, and one clerk, whose whole time is occupied with work connected with maternity and child welfare.

Although a new health visitor was appointed in 1930, the total visits paid by the health visitors were less in 1931. This is chiefly owing to the greater distances covered and also to the increase in the number of clinics the nurses are required to attend.

Infant Mortality

The number of infant deaths greatly increased during 1931. The infant mortality-rate was 70·6, against 56·4 in 1930, and is the highest rate for ten years. Eighty-seven children died before reaching the age of one year, against sixty-nine in 1930. From Table M. & C.W.1 it will be seen that the infant mortality-rate is 4·6 above that for England and Wales.

The greatest number of infant deaths is attributed, as usual, to prematurity (*see* Table M. & C.W.2). This number shews a decrease of two on the figure for 1930.

Amongst the eighty-seven children who died before the age of one year it may be noted that only fourteen attended an infant welfare centre at any time. There were six illegitimate babies in the eighty-seven deaths (three male and three female).

The table below shews the age groups of these eighty-seven children :—

	MALE.	FEMALE.	TOTAL.
Under 2 weeks	21	19	40
2 weeks and under 4 weeks	3	7	10
Total under 4 weeks	24	26	50*

*Includes 25 premature babies, of which 6 were premature twins and 4 were premature illegitimates.

	MALE.	FEMALE.	TOTAL.
4 weeks and under 1 year ..	21	16	37*

*Includes 4 premature babies and 2 full term twins, also 2 full term illegitimates.

The health visitors visited fifty-three live premature babies in 1930. Twenty-eight of these died. The corresponding figures for 1931 are fifty-seven of which twenty-nine died, twenty-two as a direct result of prematurity. The remaining seven are shewn in the table below :—

NUMBER.	AGE.	CAUSE OF DEATH.
2	4 days and 5 days (twins)	Congenital Debility
1	6 days	Congenital Debility
1	2 weeks	Gastro-enteritis
1	1 month	Congenital Debility
1	4 months	Broncho-pneumonia
1	10 months	Broncho-pneumonia

Notification of Births

The birth-rate for 1931 was 13·3, compared with 13·1 for 1930.

1,233 live births and forty-three stillbirths were registered. 1,280 live births and forty-nine stillbirths were notified, making a total of 1,329 (*see* Table M. & C.W.3). Table M. & C.W.4 shews the sources of notification.

1,300 births were investigated by the health visitors ; twenty-two of these were not notified. The remaining births occurred either in larger houses, or the mothers, resident outside the Borough, came into the Town for their confinements and later returned home. Amongst the births visited, eleven confinements resulted in twins, so that the number 1,300 represents 1,289 separate confinements. 531 babies (including stillborn babies) were born of primiparae.

Investigation discloses that eighty babies were born prematurely. This number shews a great increase on that for 1930, viz: —fifty-nine, and may be intimately connected with the rise in the infant mortality. Forty-one of these were first babies (thirty-four live and seven stillborn), and thirty-nine (twenty-three live and sixteen stillborn) were the children of multiparae. This number, eighty, includes six sets of twins.

Stillbirths

The number of stillbirths notified was forty-nine, five less than last year. Thirty-seven of these were investigated by the health visitors. Those not investigated included ten County births, *i.e.*, born in the General Hospital or other institutions of parents residing outside the Borough. Fifteen of the investigated stillbirths were first babies, who normally have a higher mortality. The following table classifies the causes of stillbirth amongst first babies as far as can be ascertained :—

PREMATURE BIRTH 7
Causes of Stillbirth :—
(*a*) Prematurity 1
(*b*) Prematurity and Dystocia 1
(*c*) Pneumonia in Mother 1
(*d*) Pneumonia in Mother (Maternal Death) 1
(*e*) ? Syphilis (Illegitimate) 1
(*f*) Cause Unknown (1 Illegitimate) .. 2

FULL TERM INSTRUMENTAL LABOUR 4
Causes of Stillbirth :—
(*a*) Dystocia 2
(*b*) Breech 2

FULL TERM NON-INSTRUMENTAL LABOUR 4
Causes of Stillbirth :—
(*a*) Pneumonia and Endocarditis in Mother 1
(*b*) Prolapse of Cord 1
(*c*) Breech 1
(*d*) Cause Unknown 1

The health visitors also visited twenty-two stillborn in twenty-one multiparae (one set of twins). The following were the causes as far as can be ascertained :—

PREMATURE BIRTH 16
Causes of Stillbirth :—
(*a*) Prematurity (including 1 set of twins) 5
(*b*) Placenta Praevia 1
(*c*) Dystocia (Instrumental Delivery) .. 1
(*d*) Kidney Disease in Mother 2
(*e*) Inattention at Birth (N.B. in one case Mother M.D.) 2
(*f*) Ante-partum Haemorrhage 2
(*g*) Pulmonary Tuberculosis in Mother .. 1
(*h*) Cause Unknown 2

FULL TERM INSTRUMENTAL LABOUR 2
Causes of Stillbirth :—
(*a*) Breech 1
(*b*) Face Presentation 1

FULL TERM NON-INSTRUMENTAL LABOUR 4
Causes of Stillbirth :—
(*a*) Dystocia 1
(*b*) Albuminuria in Mother 1
(*c*) Prematurity (Foetus) 1
(*d*) ? Syphilis 1

NOTE.—Fifteen of the above multiparae had previously had none stillborn ; of the remaining six, four had had one stillbirth each, and the other two had had three and two stillbirths respectively.

Home Visitation

Visits to Expectant Mothers :—
- First Visits 235
- Total Visits 826

Visits to Infants under One Year of Age :—
- First Visits 1,205
- Total Visits 7,817

Visits to Children from One to Five Years of Age :—
- Total Visits 8,566

The health visitors paid 17,811 visits in 1931. This number includes all the visits enumerated above and also extra ones, viz :—visits to houses where a stillbirth had occurred or a baby under one year had died, and visits to all cases of puerperal fever, puerperal pyrexia, ophthalmia neonatorum, pneumonia, etc., in women and children.

Sunshine Treatment

Ultra-violet ray treatment was continued during the year with the usual exception of the summer months. Children under five, contrary to adults or school children, can make full use in summer of the natural sunlight, which is much to be preferred to artificial. Eight children were on the books at the beginning of 1931. These eight children ceased treatment during the year, having made a total of seventy-four attendances in 1931. Most of them suffered from rickets and marasmus, but there was one case of erythrodema. All except one benefited greatly from the treatment.

Sixteen new cases were admitted to the clinic for treatment during 1931. These made a total of 135 attendances and some were still attending at the end of December. They were chiefly cases of rickets and marasmus.

The course of treatment for each child is spread over many months. The course itself consists of two parts, with one month's interval between each part. This gives the maximum benefit, provided the mothers can be persuaded to attend regularly for so long a period. The mentality of the children in almost every case undergoes a marked improvement. Whining and irritability, the usual concomitants of ill-health, disappear after the first few exposures.

The total attendances during 1931 numbered 209.

The autumn course of ultra-violet ray treatment was conducted by the health visitors, who each took a course covering a period of roughly twelve sessions at the General Hospital Clinic in order to gain some idea of the routine treatment for children and adults.

Manfield Orthopaedic Hospital

Four beds are maintained, when occupied, at Manfield Hospital, by the Maternity and Child Welfare Committee for non-tuberculous children under school age recommended by the Medical Officer of Health and the Assistant Medical Officer. The children admitted are suffering from bone diseases—chiefly rickets—or congenital malformations.

Each bed, when occupied, costs the Committee £2 10s. per week. The parents of the children are required, by a scale adopted in 1929 (which scale is similar to that adopted by the Education Committee in such cases), to pay in proportion to their income. When a recommended case has been brought before the Maternity and Child Welfare Committee, bills are issued and payments made by instalments at the Office in Dychurch Lane on admission of the child to Manfield Hospital.

Three beds were occupied at the beginning of 1931 and four when the year closed. Nine children were admitted and eight discharged. These eight children discharged were in hospital 664 days altogether, hence the average length of stay for each child was eighty-three days.

Of the twelve children treated during the year, four had congenital malformations, six had rickets, and one spastic paralysis. The remaining child suffered from contractures following burns.

Welfare Centres

There is again an increase in the number of babies and children attending the centres for consultations for the first time (*see* Table M. & C.W.5). The table gives the number of attendances and consultations at the eight centres in the Town. The total average attendance in 1930 of mothers was 376, of babies and toddlers 432, and of consultations 344. In 1931 the corresponding figures were 411, 459, and 247.

The total number of attendances at all centres during the year was as follows :—

(*a*) By babies (under 1 year)	9,943
(*b*) By toddlers (1-5 years)	10,086

The average attendance of children per session at all centres during 1931 was 57. In 1930 the figure was 54.

The total number of children who attended at the centres for the first time during the year was :—

(*a*) Children under 1 year of age	478*
(*b*) Children between 1 and 5 years	124
Total	602

*The figure 478 represents a percentage of 37·3 of the notified live births.

The ladies of the Northampton Maternity and Infant Welfare Voluntary Association continue to do their good work on the social side. They gained second place again in the competition for the Lady Astor Challenge Shield, thus becoming the holders of the Kettering Shield for one year.

Midwives

Twenty-five midwives notified their intention to practise. The Queen's Institute of District Nursing employed seven of these at different times and three were attached to the Wellingborough Road Institution. Only one bona-fide midwife takes

cases regularly. During 1931 Nurse Islip, the Senior Health Visitor, was made Inspector of Midwives. She paid forty-five visits to midwives for the purposes of inspection ; four special visits were paid by the Assistant Medical Officer. The notifications received from midwives are given in Table M. & C.W.6.

The Queen's Nurses attended 511 cases in 1931.

Maternity Homes

No new nursing homes were registered. One was converted from maternity home to nursing home for three medical or surgical cases. Thirty-one visits of inspection were paid to nursing homes during the year by the Assistant Medical Officer. There are now seven homes in the Town, instead of eight as in 1930. One was cancelled owing to removal of the owner. Three may admit maternity cases only. One, St. Matthew's Nursing Home, is registered for maternity, medical, and surgical cases.

Maternity Cases at General Hospital

The Local Authority maintains no maternity home, but has an arrangement with the Northampton General Hospital whereby expectant mothers who are found by the Assistant Medical Officer likely to require institutional treatment at the time of confinement are treated in the General Hospital, the Local Authority making itself responsible for the cost to the hospital for a period not exceeding three days before confinement to date of discharge. Cases are admitted on a certificate from the Assistant Medical Officer, either on account of feared complications or unsuitability of the home for confinement to take place there. Nine cases were admitted in 1931.

Pre-natal Work

The Council provides and maintains one ante-natal clinic at the Central Building. Since the discontinuation of attendance of the Assistant Medical Officer at the clinic at the Queen's Institute of District Nursing, extra sessions have been added to the clinic at Dychurch Lane. The clinic at the Queen's Institute is also continued fortnightly by Dr. Emily Shaw. It is necessary for this extra time to be given to pre-natal work, which unlike infant welfare work, is not yet nearing the high-water mark in efficiency in reducing mortality and morbidity. In 1930 roughly a quarter of the expectant mothers of the Town were seen at the pre-natal clinics provided by the municipality. There were no deaths amongst the cases attending in 1930.

Last year (1931) the figures below indicate a further rise in the total number seen at the clinics, one of which is now provided by the Queen's Institute of District Nursing.

In 1930 the total number of attendances at the Central Building clinic was 674. The figure for the previous year was 454 attendances. In 1931 the number of attendances was 664 at the Central Building and 107 at the Queen's Institute, making a total of 771. The number of sessions at the Central

Building clinic was increased from 48 in 1930 to 68 in 1931. The total number of new expectant mothers was 285 at the Central Building clinic alone. This figure is not available for the Central Building for 1930, but there is a great increase in 1931 as shewn by the fact that the total number for 1930 was 298 ; this number includes those seen at the Queen's Institute clinic also. In 1929 the total number was 141 at all clinics. From the attendances for the year and the number of new cases it will be seen that each patient averaged 2·3 attendances. This could hardly be less with benefit to the patient. The total number of expectant mothers who attended the Central Building clinic during the year (including those still attending from 1930) was 310. The percentage of total notified births, live and still, which the figure 310 represents is 23·3. This figure is lower than in reality, as births notified at the General Hospital and nursing homes are included in the total notified births, some of which normally belong to the County statistics. These County women are excluded from the Borough clinic.

The percentage of notified births, live and still, represented by the cases seen at the Central Building and Queen's Institute clinics together is as high as 30·6. It may be mentioned in contrast that the percentage of live births represented by the babies attending baby clinics for the first time is 37·3 (*see* " Welfare Centres " paragraph on page 68).

284 patients who had attended the Borough clinic (1930-31) had babies born in 1931. Amongst these births were seven stillbirths, *see* table below :—

Causes of Stillbirth—Maternal and Foetal :—

(*a*) ? Syphilis	3
(*b*) Albuminuria	1
(*c*) Pneumonia	1
(*d*) Premature Rupture of Membranes (Dry Labour)	1
(*e*) Premature Twins	1

Nine premature infants died, including one set of twins. Two full term infants also died. *See* table below :—

Causes of Death—Maternal and Foetal :—

Premature.

(*a*) Frequent Pregnancies (including one set of twins)	3
(*b*) Kidney Disease	4
(*c*) Cause Unknown	2

Full Term.

(*a*) Melaena Neonatorum (5 days)	1
(*b*) Marasmus (3 weeks)	1

Six births were not traceable, as the patients had removed to other districts.

Doctors and midwives send their patients to the pre-natal clinic generally by appointment and in each case a report is sent to the doctor or midwife concerned.

Towards the end of the year a consultant was appointed to deal with cases in which operative measures may be thought necessary. One case was seen under this category during 1931 by Mr. Walter Salisbury, F.R.C.S.

Pregnant women were seen and advised on 195 occasions at the welfare centres.

Doctors' Bills

The Maternity and Child Welfare Committee undertakes the payment of doctors' and midwives' bills in cases where it has been necessary, under the Rules of the Central Midwives Board, for a midwife to send for a doctor at a confinement. These cases are interviewed and brought to the General Purposes Sub-Committee which decides the amount, if any, to be recovered from the patients according to their means. After the decision of the Committee, the patient is notified from the Central Building Office and payment is made there in weekly instalments.

Dental Treatment

As in previous years, children under school age and pregnant or nursing mothers may be treated by the School Dental Officer on the recommendation of the Assistant Medical Officer. Two evenings each week are set apart for this. Payment for treatment is made to the Dental Clinic direct or later by instalments at the Central Building or at the welfare centres.

The cost of material was approximately £34. Bills amounting to just under £51 were sent to twenty-two patients. Over £47 was collected on these accounts and those outstanding from previous years. Over £21 has been collected in small fees for which no bills were issued. Table M. & C.W.7 shews the numbers dealt with and the forms of treatment.

Free Milk

Applications for free milk are considered each week by the Milk Sub-Committee. Milk is granted to pregnant and nursing mothers and for children under one year of age, if the income of the family is below a certain scale. The income is ascertained from enquiries made of employers and the Employment Bureau. One pint of milk is allowed daily for one month, or two pints in the case of twins or of a mother who is six months' pregnant and has a baby under one year. Fresh application must be made and further enquiries instituted of employers, etc., before the end of each month, if the milk is still required. The utmost care is taken to prevent ineligible people from obtaining this assistance. All applicants are known personally to the Assistant Medical Officer and the health visitors. 32,221 pints of " Pasteurised " milk were supplied under contract with local firms at a cost of over £296. 1,155 applications were con-

sidered by the Committee, of which 1,094, including 231 renewals, were granted. Sixty-one applications were refused.

Dried Milk

"Cow and Gate" dried milk is sold at cost price at the Central Building Office. This milk is not allowed to women in receipt of free milk. When the baby is one year old the milk is discontinued. There is a decrease in the amount of "Cow and Gate" milk sold. 5,036 pounds (as against 6,342 pounds in 1930) were sold to 169 separate customers. The cost of this was over £377, all of which was paid at the time of purchase.

Puerperal Fever

Ten cases, including two from the County, occurred. Nine were treated at the General Hospital; three died, two of whom were from the County. One of these latter deaths was due to general peritonitis and the other to puerperal sepsis, pyelitis, and empyema. The Borough case was due to septicaemia.

Puerperal Pyrexia

There were nine cases notified as suffering from puerperal pyrexia. Four were removed to the General Hospital and one to the Public Assistance Institution. In one patient pyrexia was due to pyelitis, and in another to temporary insanity. One case developed empyema and another broncho-pneumonia. Two cases were due to dystocia. One case developed a temperature after sutures. In another the cause was unknown. In the remaining case there was probably some venereal disease. All made good recoveries.

Maternal Deaths

Five women died, four from puerperal sepsis and one from obstetric shock accompanied by acute dilatation of the heart. All the sepsis cases were treated at the General Hospital. Only one of these women attended the Borough pre-natal clinic.

Ophthalmia Neonatorum

Eight cases of ophthalmia were notified. All were midwives' cases. Three were treated as in-patients at the General Hospital, one in a maternity home, and the remainder were dealt with at home. Swabs were taken in all cases but two in which no discharge was present at the time of visit. All were negative then, but one was found to contain Neisser's organism on admission to the General Hospital. Table M. & C.W. 8 shews details of these cases.

In five instances the discharge commenced during the first week, in two about the tenth day, and in the remaining one in the third week. In two cases only was there a history of the mother having had a vaginal discharge. In two instances impairment of vision resulted, viz:—corneal opacities in both eyes in one case, and in one eye in the other case.

Diarrhoea and Enteritis

Seven babies under the age of two years died from diarrhoea and enteritis. The corresponding figure for 1930 was five. The rate of 5·7 per thousand live births registered is just below that for England and Wales.

Children Act, 1908

The Maternity and Child Welfare Department was required to administer Part I. of the Children Act, 1908, relating to foster-children, on 1st April, 1930. The Act provides for the supervision of children boarded out with foster-parents for gain. The health visitors visit all such children up to the age of seven years. The number of foster-parents on the register at the beginning of 1931 was thirty-four ; at the end of the year thirty-nine. There were thirty-nine children on the register at the beginning of 1931 and forty-six at the end.

During 1931 no legal order was made under the Act. One child (along with his brother over seven years of age) was removed by the mother on instructions from the Medical Officer of Health because of the unsuitability of the home.

TABLE M.&C.W.1. ENGLAND AND WALES AND NORTHAMPTON, 1922–1931.

INFANT MORTALITY IN EACH YEAR OF THE DECENNIUM.

	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931
England and Wales	77	69	75	75	70	70	65	74	60	66
Northampton	52·2	57·2	52·1	66·6	55·0	60·9	53·5	52·8	56·4	70·6

TABLE M. & C.W. 2. NORTHAMPTON, 1927–1931.

INFANT MORTALITY. CAUSES OF DEATH*.

CAUSES OF DEATH.	1927	1928	1929	1930	1931
Atrophy, Debility, and Marasmus	8	5	8	7	11
Bronchitis and Pneumonia	7	13	12	15	9
Congenital Malformations	6	6	2	3	8
Convulsions	4	3	3	2	5
Diarrhoea, Enteritis, and Gastritis	4	1	7	5	7
Measles	—	2	—	—	1
Premature Birth	32	25	20	24	22
Tuberculous Diseases	1	—	—	—	3
Whooping Cough	8	—	1	5	1
All Other Causes	8	15	13	8	20
TOTAL DEATHS	78	70	66	69	87
TOTAL LIVE BIRTHS	1281	1308	1249	1224	1233
INFANT MORTALITY	60·9	53·5	52·8	56·4	70·6

**See also* Table D at end of Report.

TABLE M. & C.W. 3. NORTHAMPTON, 1931.

LIVE BIRTHS AND STILLBIRTHS REGISTERED AND NOTIFIED.

	MALES.	FEMALES.	TOTAL.
Number of Live Births Registered	635	598	1233
Number of Stillbirths Registered	19	24	43
Total Number of Births Notified	687	642	1329
Number of Live Births Notified	664	616	1280
Number of Stillbirths Notified	23	26	49

Table M. & C.W. 4. Northampton, 1931.

Notification of Births. Sources of Notification.

	NUMBER.	PER CENT.
Medical Practitioners	427*	32·1
Certified Midwives	855	64·3
Parents and Others	47	3·6
Totals	1329	100·0

*Includes 113 also notified by Midwives.

Table M. & C.W. 5. Northampton, 1931.

Maternity and Infant Welfare Centres. Statistics.

CENTRE.	DAY OF MEETING (2.30 TO 4.30 P.M.).	AVERAGE ATTENDANCE PER WEEK.				Average Number consulting Doctor per Session.
		Mothers (incl. Expectant Mothers).	Babies.	Toddlers.	Total Babies and Toddlers.	
Abington Avenue ..	Thursdays ..	75	35	46	81	33
Central Building ..	Wednesdays	42	25	22	47	31
Central Building ..	Thursdays ..	50	32	22	54	33
Doddridge Memorial	Tuesdays	47	19	29	48	29
Far Cotton	Fridays	36	23	19	42	29
Kingsthorpe	Tuesdays	47	29	28	57	29
St. Edmund's	Fridays	65	31	40	71	33
St. Sepulchre's	Wednesdays	49	30	29	59	30
	Totals	411	224	235	459	247

TABLE M. & C.W. 6. NORTHAMPTON, 1931.

MIDWIVES ACTS. NOTIFICATIONS RECEIVED FROM MIDWIVES.

NATURE OF REPORT.	MIDWIVES NOTIFYING.	NO. OF REPORTS.	REMARKS.
Records of Sending for Medical Help ..	16	198	Mother's condition 161 Infant's condition 37
Notifications of Still-birth	6	7	Full Term ..... 5 Premature 2
Notifications of Death	5	9	Mother ..... 0 Infant 9
Notifications of Artificial Feeding	5	7	Mother's condition 6 Infant's condition 1
Notifications of Liability to be a Source of Infection	8	11	—
Notifications of Having Laid Out a Dead Body	—	—	—
Total	17	232	—

TABLE M. & C.W. 7. NORTHAMPTON, 1931.

SUMMARY OF DENTAL OPERATIONS.

NATURE OF OPERATION, ETC.	MOTHERS.	CHILDREN.	TOTALS.
Number seen	51	144	195
Number treated	42	141	183
Number of attendances	264	222	486
Number of teeth extracted	175	237	412
Number of administrations of local anaesthetic	65	133	198
Number of fillings	34	—	34
Number of linings	14	—	14
Number of teeth treated with nitrate of silver	20	402	422
Number of dressings	26	1	27
Number of scalings	2	—	2
Number of artificial plates	23	—	23
Number of plate repairs	9	—	9
Number of teeth on plates	237	—	237
Number of other operations	22	—	22
Number completed	25	103	128
Number partly completed, continued to 1932	11	1	12

TABLE M. & C.W. 8. NORTHAMPTON, 1931.

OPHTHALMIA NEONATORUM. ANALYSIS OF CASES NOTIFIED, WITH ULTIMATE RESULT.

CASES NOTIFIED.	TREATED.		ULTIMATE RESULT.			
	AT HOME.	IN HOSPITAL.	VISION UN-IMPAIRED.	VISION IMPAIRED.	TOTAL BLINDNESS.	DIED.
8	4	4*	6	2	—	—

*Three as in-patients at the General Hospital and one in a maternity home.

See also Section VII. of Medical Officer's Report (pages 46 to 50).

APPENDIX III.

STATISTICAL TABLES.

Table 1. Northampton, 1922–1931.

Natural Increase of Population in Each Year of the Decennium.

Year (Middle)	Population (Total).*	Births.	Deaths.	Natural Increase.	Increase per 1,000.
1922	92950	1646	1046	600	6·4
1923	93230	1662	1086	576	6·2
1924	93590	1534	1036	498	5·3
1925	93970	1471	1116	355	3·8
1926	93740	1309	1064	245	2·6
1927	93260	1281	1124	157	1·7
1928	94270	1308	1060	248	2·6
1929	94180	1249	1093	156	1·7
1930	93460	1224	1072	152	1·6
1931	92970	1233	1091	142	1·5

*Estimated by Registrar-General.

Table 2. England and Wales and Northampton, 1922–1931.

Birth-rates in Each Year of the Decennium.

	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931
England and Wales	20·6	19·7	18·8	18·3	17·8	16·7	16·7	16·3	16·3	15·8
Northampton	17·7	17·8	16·4	15·6	14·0	13·7	13·9	13·3	13·1	13·3

Table 3. England and Wales and Northampton, 1922–1931.

Death-rates in Each Year of the Decennium.

	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931
England and Wales	12·9	11·6	12·2	12·2	11·6	12·3	11·7	13·4	11·4	12·3
Northampton	11·3	11·6	11·1	11·9	11·4	12·0	11·3	11·6	11·5	11·8

TABLE 4. NORTHAMPTON, 1931. METEOROLOGICAL DATA.

MONTH.	RAINFALL.				TEMPERATURE.						DIRECTION OF WIND.				Quarters.
	Total inches.	Greatest in 24 hours.		Days on which 0·01 in. or more fell.	Mean.	Maximum.		Minimum.		No. of Nights at or below 32 deg.	S.W. Quadrant including W. Days.	S.E. Quadrant including S. Days.	N.E. Quadrant including E. Days.	N.W. Quadrant including N. Days.	
		Depth.	Date.			Deg.	Date.	Deg.	Date.						
January ..	1·09	0·19	31	19	38·54	52·2	16	24·5	7	14	10	1	3	17	First.
February	1·98	0·58	27	19	39·73	56·5	25	29·5	5	7	11	2	5	10	
March	0·11	0·06	8	5	40·58	63·5	20	23·5	10	14	3	9	10	9	
April	3·35	0·75	2	21	47·17	67·0	11	31·0	1	1	5	7	1	17	Second.
May	2·25	0·58	21	15	54·56	76·0	27	36·5	21	—	13	8	7	3	
June	1·48	0·60	5	15	60·82	78·0	28	41·5	26	—	18	2	2	8	
July	3·18	1·00	14	21	62·53	77·0	3	47·5	21	—	20	3	—	8	Third.
August ..	3·53	1·05	8	16	59·57	75·5	1, 4	44·0	24	—	7	5	11	8	
September	2·50	0·88	3	14	54·83	70·0	16	37·0	8	—	8	3	6	13	
October ..	0·37	0·20	29	6	48·42	66·5	2	27·0	27	7	20	—	3	8	Fourth.
November	2·01	0·30	3, 18	19	47·06	59·5	3	34·0	30	—	18	10	1	1	
December	0·82	0·37	5	12	42·40	59·5	4	25·0	31	6	14	—	6	11	
Year 1931	22·67	1·05	Aug. 8	182	49·68	78·0	June 28	23·5	Mar. 10	49	147*	50	55	113	

*Includes 26 "calm" days (4 in January, 3 in May, 4 in September, 7 in October, 7 in November, and 1 in December).

Table 5. Northampton, 1931.

Summary of Routine Work carried out by the Sanitary Inspectors.

	Number of Inspections, etc.	No. at which Nuisances, Defects, etc., were Found.
1.—Total Number of Inspections and Visits	18008	
2.—Number of premises at which Nuisances were Found		1212
3.—Total Number of Houses Inspected	1863	1122
4.—Number of these Houses Repaired		778
5.—Number of these Houses Cleansed and Whitewashed		651
6.—Number of Houses Cleansed after Certificate of M.O.H. (Sec. 46, P.H.A. 1875)		2
7.—Number of First Visits made in consequence of Complaints by Residents	501	388
8.—Notices Served	910	
9.—Drains :—		
Tested by Smoke Test	34	26
Tested by Volatile Test	37	10
Tested by Water Test	7	0
Exposed under Sec. 41, P.H.A. 1875	5	5
Drains reported choked		118
Drains reconstructed		38
Drains repaired		58
Bath, lavatory, or sink waste pipes disconnected from drains		0
New pans fixed to closets		30
Indoor soil pipes abolished		0
Closets supplied with flushing apparatus		8
10.—Contraventions of Bye-laws :—		
Animals kept so as to be a nuisance		1
Animals kept in contravention of Bye-laws		0
Accumulations of manure, etc., at :—		
(*a*) Houses		2
(*b*) Other premises		13
Other contraventions		1
11.—Other Nuisances :—		
Overcrowding in houses		11
Yard pavings re-laid or repaired		152
Spoutings repaired or renewed		196
New slop sinks fixed		25
Inspections of courts and alleys	11	2
Houses supplied with town water		93
Chimney observations	60	4
Miscellaneous nuisances		98

Continued on next page.

TABLE 5.—*continued.*

	Number of Inspections, etc.	No. at which Nuisances, Defects, etc., were Found.
12.—Factories and Workshops :—		
Number of Factories Inspected	127	23
Number of Workshops Inspected	133	14
Number of Workplaces Inspected	139	20
Number of Outworkers' Premises Inspected	88	4
13.—Dairies, Cowsheds, and Milkshops :—		
Number of Inspections	472	15
Number of New Registrations	17	
14.—Bakehouses—Number of Inspections	272	37
15.—Slaughterhouses :—		
Number of Inspections while Slaughtering was in Progress	3619	22
Number of Other Inspections	235	14
16.—Other Premises where Food is Manufactured or Stored—Number of Inspections	1311	22
17.—Food and Drugs (Adulteration) Act—Number of Samples sent to Public Analyst	274	20
18.—Infectious Diseases—Visits to Infected Houses :—		
(*a*) First visits for investigation	337	
(*b*) Weekly visits to secure isolation	219	
(*c*) Visits to control disinfection	402	
Visits to Smallpox Contacts	105	
Rooms stripped under I.D.P. Act	239	
19.—Tuberculosis—Rooms stripped, etc.	93	
20.—Number of Visits for Inspection of :—		
(*a*) Schools	19	2
(*b*) Public Lavatories	151	2
(*c*) Van-dwellers	13	1
(*d*) Cinemas, etc.	15	0
21.—House-to-House Inspection :—		
Number of Houses Inspected	642	481
Houses Cleansed and Whitewashed		371
Defective Houses Repaired		433
22.—Houses Unfit for Human Habitation reported to M.O.H. under :—		
(*a*) Sec. 19, Housing Act, 1930	13	13
(*b*) Sec. 17, Housing Act, 1930	0	0

Table 6. Northampton, 1931.

Reconstruction of Drains.

SITUATION OF PREMISES.	NO. OF HOUSES.
Abington Avenue, 48	1
Alfred Street, 30	1
Althorp Street, 1, 3	2
Augustine Street, 30, 32	2
Bailiff Street, 100, 102, 104	3
Bridge Street, 4, 15	2
Cowper Street, 34, 36	2
Cromwell Street, 19	1
Earl Street, St. Crispin's Hall	1
Francis Street, 41, 43, 45, 47	4
Freehold Street, 36, 38, 40	3
Gas Street, 9	1
Guildhall Road, 32	1
Hunter Street, 91, 93	2
Kettering Road, 66	1
Newtown Road, 18, 43, 45	3
Queens Road, 24	1
St. Andrew's Road, 13, 14, 15, "Duke of York"	4
St. James' Street, 35	1
Scarletwell Street, 134, 136	2
Total	38

Table 7. Northampton, 1931.

Drain Examination under Section 41 of the Public Health Act, 1875.

SITUATION OF PREMISES.	RESULT OF EXAMINATION.	REMARKS.
Alfred Street, 30	Defective	Reconstructed.
Talbot Road, 78, 80, 82, 84	Defective	Repaired.
Number of Drains Examined 5		

Table 8. Northampton, 1919–1931.

Number of Rats known to have been Destroyed by the Official Rat-catcher in each Year.

YEAR.	NUMBER OF TAILS.
1919 (three months)	163
1920	3,214
1921	2,994
1922	3,237
1923	3,337
1924	3,624
1925	2,976
1926	2,155
1927	2,434
1928	2,814
1929	3,331
1930	3,268
1931	3,449
Total	36,996

Table 9. Northampton, 1931.

Housing Act, 1930. Houses represented during the Year.

Subsequent Action and Condition at the End of the Year.

HOUSES.	DATE OF		REMARKS.
	Representations.	Demolition Orders.	
Doddridge Street, 7	11–2–31	—	Converted into garage.
Grafton Street, 8 and 20 ; Kinburn Place, 2 and 4	16–12–31	—	To be demolished by Improvements Committee in connection with street widening scheme. (No. 4, Kinburn Place empty ; rest occupied).
St. John's Terrace, 3, 5, and 7	15–4–31	27–7–31	Demolition in progress.
Silver Street, 31, 33, 35, 37, and 39	11–3–31	—	Education Committee asked to demolish property. (All five houses empty).

Table 10. Northampton, 1931.

Housing Acts, 1919–1930. Houses represented previous to 1931, but not Finally Dealt with before this Year began. Action taken during 1931, and Condition at the End of the Year.

HOUSES.	DATE OF			REMARKS.
	Representations.	Closing Orders.	Demolition Orders.	
Bath Terrace, 1, 2, 3, and 4	10–9–30	—	1–6–31	Standing empty. Undertaking given by owner that houses would not be used again for human habitation.
Chapel Gardens, 6 7, 8, 9, and 10	4–4–28	7–1–29	26–1–31	Demolished.
Crispin Street, 25, 27, 29, and 31	4–5–27	10–11–27	—	Demolished.
Gas Street, 18	14–4–26	6–12–26	4–3–29	Demolished.
Gas Street, 36 and 38 ; Mill Lane, 3	12–2–30	5–5–30	26–1–31	Demolished.
Manor Road, "Rose Cottage"	19–11–30	—	—	Repaired to Borough Engineer's satisfaction.
Mayorhold, 12 and 13	19–11–30	—	1–6–31	Demolished.
Nelson Street, 22 23, and 24	12–3–30	7–7–30	7–12–31	Standing empty.
Regent Square, 1 and 2 (dwelling portions)	7–3–28	4–6–28	—	Both empty. (Shops in use).
Riding, 25, 26, 27, 28, and 32	20–9–22	4–12–22	—	No. 26 occupied ; remainder used as stores (not altered).
Riding, 33, 34, and 36	20–9–22	1–1–23	—	No. 34 occupied ; No. 36 used as store (not altered) ; No. 33 standing empty.
St. James' Street, 2, 4, 6, and 8	10–9–30	—	See remarks	Demolition Orders made on Nos. 4, 6, and 8 on 27–7–31—demolished ; No. 2 repaired.
Scarletwell Street, 26, 28, 30, 32, and 34	10–9–30	—	27–7–31	Demolished.
Scarletwell Street, Court 2 ; 4	16–7–30	28–7–30	26–1–31	Demolished.

Table 11. Northampton, 1931.

Unsound Food Voluntarily Surrendered and Destroyed.

NATURE OF FOOD.	WEIGHT.			
	TONS.	CWTS.	QRS.	LBS.
Beef, home killed	23	5	0	14
Beef, imported	—	2	0	21
Mutton, home killed	1	3	2	26
Offal, home killed	2	0	3	0
Pork, home killed	5	0	0	25
Veal, home killed	—	7	1	18
Chestnuts	—	—	3	17
Eggs, imported	—	—	—	18
Fish	1	14	3	1
Fruit	—	5	0	0
Ham	—	1	2	0
Total (683 surrenders)	34	1	3	0

Also 2,242 tins of food, 1 chicken, 9 ducks, 118 fowls, 24 grouse, 11 pheasants, 17 pigeons, 11 plovers, 77 rabbits, 2 teals, and 2 turkeys.

Table 12. Northampton, 1931.

Unsound Food Seized, Condemned by Magistrates and Destroyed.

NATURE OF FOOD.	WEIGHT.	PLACE OF SEIZURE.	REMARKS.
Pork, home killed	8 lbs. 0 ozs.	Butcher's shop	Owner warned.
Offal (pork), home killed	3 lbs. 2 ozs.	Butcher's shop	Owner warned.
Offal (pork), home killed	1 lb. 4 ozs.	Butcher's shop	Owner warned.
Total	12 lbs. 6 ozs.		

Table 13. Northampton, 1931.

Unsound Food. Total Quantity Dealt with by the Department during the year.

METHOD OF OBTAINING POSSESSION.	WEIGHT.			
	TONS.	CWTS.	QRS.	LBS.
3 Seizures	—	—	—	12
683 Surrenders	34	1	3	0
Total	34	1	3	12

Table 14. Northampton, 1931.

Unsound Food. Statement of Carcases of Meat Condemned, shewing Number affected with Tuberculosis.

NATURE OF FOOD.	MEAT CONDEMNED.		MEAT FOUND TO BE TUBERCULOUS.	
	WHOLE CARCASES.	PART CARCASES.	WHOLE CARCASES.	PART CARCASES.
Beef	79	52	55	48
Mutton	75	2	—	—
Pork	85	129	39	129
Veal	9	2	2	—

TABLE 15. NORTHAMPTON, 1931.

FOOD AND DRUGS. SAMPLES TAKEN FOR ANALYSIS.

NATURE OF SAMPLE.	INFORMAL SAMPLES.		OFFICIAL SAMPLES.	
	TOTAL NUMBER.	NO. NOT GENUINE.	TOTAL NUMBER.	NO. NOT GENUINE.
Ammoniated Tincture of Quinine	3	—	—	—
Baking Powder	2	—	—	—
Borax	2	1	—	—
Butter	—	—	6	—
Camphorated Oil	1	—	2	—
Cheese	—	—	3	—
Citrate of Magnesia	2	—	—	—
Coffee	—	—	1	—
Cream	6	—	—	—
Custard Powder	1	—	—	—
Dripping	—	—	1	—
Gregory Powder	2	—	—	—
Ground Almonds	2	—	—	—
Ground Ginger	2	—	—	—
Honey	2	—	—	—
Jam	—	—	3	—
Lard	—	—	2	—
Lemonade Powder, etc.	2	—	—	—
Lime Juice Cordial	—	—	2	—
Margarine	—	—	5	—
Marmalade	—	—	3	—
Milk	56	7	121	11
Milk (condensed)	2	—	—	—
Milk (skim)	—	—	1	—
Mustard	2	—	—	—
Pepper	3	—	—	—
Potted Meat	—	—	6	—
Rice	—	—	5	—
Sago	—	—	2	—
Sausages	4	1	—	—
Sausages (preserved)	1	—	—	—
Seidlitz Powder	2	—	—	—
Sugar	—	—	3	—
Sweet Spirit of Nitre	2	—	—	—
Vinegar	—	—	5	—
Wine (Orange Quinine)	2	—	—	—
Zinc Ointment	2	—	—	—
Totals	103*	9	171*	11

*A total of 274 samples, twenty of which (7·3 per cent.) were found not to be genuine.

Table 16. Northampton, 1931.

Enterica, Smallpox, Scarlet Fever, and Diphtheria.

Disease.	Notifications.	Attack-rates per 1,000.	Deaths.	Death-rates.	Fatality.	Numbers removed to Hospital.	Removal rates per cent.
Enterica	9	0·10	0	—	—	8*	88·9
Smallpox	8	0·09	0	—	—	8	100·0
Scarlet Fever	165	1·78	0	—	—	99	60·0
Diphtheria	83	0·89	4	0·04	4·8	71†	85·5

*Includes three admitted to the General Hospital, one being transferred subsequently to the Borough Infectious Diseases Hospital.

†Includes three removed to the General Hospital, two being transferred to complete recovery at the Borough Infectious Diseases Hospital.

Table 17. Northampton, 1931.

Borough Hospital, Harborough Road. Cases of Communicable Disease under Treatment.

	Scarlet Fever.	Diphtheria.	Enterica.	Totals.
Number remaining from 1930	17	16	—	33
Number admitted during 1931	104	74	6	184
Number discharged during 1931	113	79	6	198
Number died during 1931	1	4	—	5
Number remaining at end of 1931	7	7	—	14

Table 18. Northampton, 1931.

Number of Articles Disinfected by Steam Month by Month at the Disinfecting Station, St. Andrew's Road.

Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
592	674	642	684	423	508	370	287	256	373	304	387	5500

Table 19. Northampton, 1931.

Clinical Bacteriology. Number of Suspected Cases in which Examination was Made and the Number and Nature of the Reports Received in Connection with These.

Diphtheria—Throat and Nose Secretions.				Typhoid and Paratyphoid Fevers—Dreyer's Tests, etc.				Tuberculosis—Sputum, Urine, etc.				Other Conditions.				Totals.			
No. of Suspected Cases.	Reports received.			No. of Suspected Cases.	Reports received.			No. of Suspected Cases.	Reports received.			No. of Suspected Cases.	Reports received.			No. of Suspected Cases.	Reports received.		
	Positive.	Negative.	Total.		Positive.	Negative.	Total.		Positive.	Negative.	Total.		Positive.	Negative.	Total.		Positive.	Negative.	Total.
396	226	779	1005	14	6	14	20	451	108	460	568	2	—	2	2	863	340	1255	1595

The above Table does not take into account the reports made in connection with the venereal diseases scheme.

Table A.

COUNTY BOROUGH OF NORTHAMPTON.

Vital Statistics during 1931 and Previous Years.

Year.	Total Population estimated to Middle of each Year.	Births.			Total Deaths registered in the District.		Transferable Deaths.		Nett Deaths belonging to the District.			
		Uncorrected Number.	Nett.						Under One Year.		At all Ages.	
			Number.	Rate.	Number.	Rate.	Non-residents registered in the District.	Residents not registered in the District.	Number.	Rate per 1,000 Live Births.	Number.	Rate.
1	2	3	4	5	6	7	8	9	10	11	12	13
1921	92300	1924	1881	20·4	1022	11·1	123	65	124	65·9	964	10·4
1922	92950	1697	1646	17·7	1108	11·9	116	54	86	52·2	1046	11·3
1923	93230	1723	1662	17·8	1177	12·6	140	49	95	57·2	1086	11·6
1924	93590	1591	1534	16·4	1143	12·2	149	42	80	52·1	1036	11·1
1925	93970	1531	1471	15·6	1229	13·1	167	54	98	66·6	1116	11·9
1926	93740	1393	1309	14·0	1163	12·4	174	75	72	55·0	1064	11·4
1927	93260	1362	1281	13·7	1248	13·4	170	46	78	60·9	1124	12·0
1928	94270	1366	1308	13·9	1204	12·8	207	63	70	53·5	1060	11·3
1929	94180	1332	1249	13·3	1269	13·5	226	50	66	52·8	1093	11·6
1930	93460	1334	1224	13·1	1217	13·0	193	48	69	56·4	1072	11·5
1931	92970	1307	1233	13·3	1243	13·4	205	53	87	70·6	1091	11·8

This Table is arranged to shew the gross births and deaths in the district and the births and deaths properly belonging to it with the corresponding rates.

Column 6 includes the whole of the deaths registered during the year as having actually occurred within Northampton and excludes any deaths of soldiers and sailors. Such deaths were as follow :—

YEAR.	NO. OF DEATHS.
1921	0
1922	0
1923	1
1924	0
1925	0
1926	2
1927	0
1928	0
1929	0
1930	0
1931	0

TABLE B.

COUNTY BOROUGH OF NORTHAMPTON.

Cases of Notifiable Diseases during the Year 1931.

NOTIFIABLE DISEASE.	NUMBER OF CASES NOTIFIED.													CASES NOTIFIED IN EACH WARD.												Cases Admitted to Borough Hospitals	Total Deaths (*see* Table C.).
	All Ages.	AGES (IN YEARS).												Abington.	Castle.	Delapre.	Kingsley.	Kingsthorpe.	North.	St. Crispin's.	St. Edmund's.	St. James'.	St. Lawrence's.	St. Michael's.	South.		
		0–	1–	2–	3–	4–	5–	10–	15–	20–	35–	45–	65–														
Acute Poliomyelitis	1	1	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	1
Diphtheria	83	1	2	—	3	6	49	13	3	4	1	1	—	6	15	5	9	10	7	2	4	6	4	3	12	70	4
Encephalitis Lethargica	2	—	—	—	—	—	1	—	—	—	—	1	—	—	—	—	1	—	—	—	1	—	—	—	—	—	2
Enterica	9	—	—	—	—	1	4	—	1	3	—	—	—	—	—	—	—	6	—	—	—	—	1	—	2	6	—
Erysipelas	42	4	—	—	—	—	—	1	—	3	3	20	11	5	3	2	5	1	5	5	—	2	4	4	6	—	2
Ophthalmia Neonatorum	8	8	—	—	—	—	—	—	—	—	—	—	—	1	—	—	2	2	3	—	—	—	—	—	—	—	—
Pneumonia	143	4	13	8	4	2	14	10	7	14	16	35	16	9	16	8	19	18	15	9	7	12	17	8	5	—	53*
Puerperal Fever	10	—	—	—	—	—	—	—	—	9	1	—	—	—	—	1	1	1	1	—	1	2	—	—	3	—	4
Puerperal Pyrexia	9	—	—	—	—	—	—	—	—	8	1	—	—	1	—	—	1	3	3	1	—	—	—	—	—	—	—
Scarlet Fever	165	—	2	3	15	9	79	29	8	17	2	1	—	18	10	13	35	17	11	4	5	18	7	16	11	99	—
Smallpox	8	—	—	—	—	—	4	1	—	1	1	1	—	—	—	—	—	2	—	—	—	—	—	4	2	8	—
Tuberculosis :—																											
Respiratory	115	—	—	—	—	—	1	3	13	55	20	21	2	10	11	2	16	9	12	5	8	11	14	8	9	63†	70
Other Forms	29	2	2	2	1	1	7	2	4	4	2	1	1	1	5	2	2	7	2	1	—	1	5	3	—	3‡	14
Totals	624	20	19	13	23	19	159	59	36	118	47	81	30	51	61	33	91	76	59	27	26	52	52	46	50	249	150

*Nine of these were from influenzal pneumonia.
†Thirty-seven to Welford Road Hospital and twenty-six to Creaton Sanatorium.
‡All three to Manfield Orthopaedic Hospital.

The above figures take no account of corrections in diagnosis. (*See* Section VI. of this Report for further information).

INSTITUTIONS :—(1) Harborough Road Infectious Diseases Hospital (85 beds, allowing 144 sq. ft. per bed) ;
(2) Smallpox Hospital, near Hardingstone (48 beds, allowing 144 sq. ft. per bed) ;
(3) Welford Road Tuberculosis Hospital (28 beds) ;
(4) Creaton Sanatorium, Northampton (15 beds reserved for Northampton County Borough) ;
(5) Manfield Orthopaedic Hospital, Northampton (20 beds available for surgical tuberculosis cases).

TABLE C.

COUNTY BOROUGH OF NORTHAMPTON.

Causes of Death at Different Periods of Life during the Year 1931.

Causes of Death.	Nett Deaths at the Subjoined Ages (in Years) of "Residents" whether occurring within or without the District.														Total Deaths whether of Residents or Non-Residents in Institutions in the District.
	All Ages.			0–	1–	2–	5–	15–	25–	35–	45–	55–	65–	75–	
	Total.	M.	F.												
ALL CAUSES Certified	1091	540	551	87	9	16	20	37	50	59	114	173	224	282	472
ALL CAUSES Uncertified	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1. Typhoid and Paratyphoid Fevers	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2. Measles	9	4	5	1	2	5	—	1	—	—	—	—	—	—	—
3. Scarlet Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4. Whooping Cough	2	1	1	1	—	1	—	—	—	—	—	—	—	—	—
5. Diphtheria	4	1	3	—	—	1	3	—	—	—	—	—	—	—	—
*6. Influenza	23	8	15	—	—	—	—	1	1	2	3	4	4	8	2
7. Encephalitis Lethargica	2	1	1	—	—	—	—	1	—	—	—	1	—	—	3
8. Cerebro-spinal Fever	1	1	—	—	—	—	—	—	1	—	—	—	—	—	2
9. Tuberculosis of Respiratory System	70	33	37	—	—	—	1	13	20	15	14	5	1	1	13
*10. Other Tuberculous Diseases	14	9	5	3	1	3	5	1	1	—	—	—	—	—	14
11. Syphilis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12. General Paralysis of the Insane, Tabes Dorsalis	1	1	—	—	—	—	—	—	—	—	—	1	—	—	—
13. Cancer, Malignant Disease	148	66	82	—	—	—	—	—	2	8	30	43	37	28	65
14. Diabetes	7	2	5	—	—	—	—	—	—	1	—	2	1	3	8
15. Cerebral Haemorrhage, etc.	69	34	35	—	—	—	—	—	1	—	3	4	29	32	19
16. Heart Disease	245	107	138	—	—	1	1	4	4	10	15	42	78	90	49
17. Aneurysm	2	2	—	—	—	—	—	—	—	—	1	1	—	—	1
*18. Other Circulatory Diseases	45	33	12	—	—	—	—	—	1	—	2	9	20	13	13
19. Bronchitis	73	33	40	4	1	—	—	—	—	3	4	6	11	44	16
*20. Pneumonia (all forms)	44	28	16	5	2	1	3	4	—	—	7	7	9	6	20
21. Other Respiratory Diseases	12	7	5	—	—	—	—	1	1	2	3	3	—	2	9
22. Peptic Ulcer	12	7	5	—	—	—	—	—	1	2	3	2	3	1	18
23. Diarrhoea, etc.	9	3	6	7	—	—	—	—	—	—	—	—	1	1	5
24. Appendicitis	8	3	5	—	—	—	1	1	1	1	—	2	1	1	16
25. Cirrhosis of Liver	2	1	1	—	—	—	—	—	—	—	—	2	—	—	—
26. Other Diseases of Liver, etc.	2	1	1	—	—	—	—	1	—	—	1	—	—	—	5
27. Other Digestive Diseases	22	10	12	2	—	1	1	—	—	1	6	4	5	2	20
28. Acute and Chronic Nephritis	37	27	10	—	—	—	1	—	2	—	8	11	13	2	9
29. Puerperal Sepsis	4	—	4	—	—	—	—	1	2	1	—	—	—	—	5
30. Other Puerperal Causes	1	—	1	—	—	—	—	—	1	—	—	—	—	—	4
31. Congenital Debility, Premature Birth, Malformations, etc.	50	28	22	50	—	—	—	—	—	—	—	—	—	—	30
32. Senility	35	9	26	—	—	—	—	—	—	—	—	—	2	33	4
33. Suicide	21	17	4	—	—	—	—	—	3	7	4	4	2	1	5
34. Other Violence	36	25	11	5	—	1	1	3	5	4	5	4	3	5	47
*35. Other Defined Causes	81	38	43	9	3	2	3	5	3	2	5	16	24	9	69
36. Causes Ill-defined or Unknown	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Totals	1091	540	551	87	9	16	20	37	50	59	114	173	244	282	472
*Sub-entries included in above figures: 6 (a) Influenzal Pneumonia	9	2	7	—	—	—	—	1	—	1	2	—	2	3	1
10 (a) Tuberculous Meningitis	10	6	4	2	1	3	4	—	—	—	—	—	—	—	11
18 (a) Arterio-sclerosis	39	29	10	—	—	—	—	—	—	—	2	7	18	12	7
20 (a) Broncho-pneumonia	22	13	9	5	2	1	1	2	—	—	2	—	5	4	11
35 (a) Erysipelas	2	1	1	—	—	—	—	—	—	—	—	1	1	—	2
(b) Acute Poliomyelitis	1	1	—	—	—	—	1	—	—	—	—	—	—	—	—
(c) Chickenpox	1	—	1	—	1	—	—	—	—	—	—	—	—	—	1
(d) Rheumatic Fever	3	1	2	—	—	—	1	—	1	—	—	—	1	—	2
(e) Meningitis	1	1	—	—	1	—	—	—	—	—	—	—	—	—	3

Nett Deaths Registered.	M.	F.	Totals.	Death-Rates.
First Quarter	170	192	362	15·6
Second Quarter	134	117	251	10·8
Third Quarter	101	109	210	9·1
Fourth Quarter	135	133	268	11·6
Totals (52 weeks)	540	551	1091	11·8

TABLE D.

COUNTY BOROUGH OF NORTHAMPTON.

INFANT MORTALITY DURING THE YEAR 1931.

Nett Deaths from stated Causes at various Ages under One Year.

Causes of Death.	Under 1 week.	1 week and under 2 weeks.	2 weeks and under 3 weeks.	3 weeks and under 4 weeks.	Total under 4 weeks.	4 weeks and under 3 months.	3 months and under 6 months.	6 months and under 9 months.	9 months and under 12 months.	Total Deaths under 1 year.
ALL CAUSES — Certified	29	11	6	4	50	11	10	10	6	87
ALL CAUSES — Uncertified	—	—	—	—	—	—	—	—	—	—
1. Smallpox	—	—	—	—	—	—	—	—	—	—
2. Chickenpox	—	—	—	—	—	—	—	—	—	—
3. Measles	—	—	—	—	—	—	—	—	1	1
4. Scarlet Fever	—	—	—	—	—	—	—	—	—	—
5. Whooping Cough	—	—	—	—	—	—	—	1	—	1
6. Diphtheria	—	—	—	—	—	—	—	—	—	—
7. Erysipelas	—	—	—	—	—	—	—	—	—	—
8. Tuberculous Meningitis	—	—	—	—	—	—	—	—	2	2
9. Abdominal Tuberculosis	—	—	—	—	—	—	—	—	1	1
10. Other Tuberculous Diseases	—	—	—	—	—	—	—	—	—	—
11. Meningitis (*not Tuberculous*)	—	—	—	—	—	—	—	—	—	—
12. Convulsions	—	—	—	1	1	2	1	—	1	5
13. Laryngitis	—	—	—	—	—	—	—	—	—	—
14. Bronchitis	1	—	—	1	2	1	—	1	—	4
15. Pneumonia (all forms)	—	—	—	—	—	—	3	1	1	5
16. Diarrhoea	—	—	—	—	—	1	—	1	—	2
17. Enteritis	—	1	1	1	3	1	1	—	—	5
18. Gastritis	—	—	—	—	—	—	—	—	—	—
19. Syphilis	—	—	—	—	—	—	—	—	—	—
20. Rickets	—	—	—	—	—	—	—	—	—	—
21. Suffocation, overlaying	—	—	—	—	—	1	—	—	—	1
22. Injury at Birth	—	1	—	—	1	—	—	—	—	1
23. Atelectasis	4	—	1	—	5	—	—	—	—	5
24. Congenital Malformations	3	3	1	—	7	1	—	—	—	8
25. Premature Birth	15	3	2	1	21	1	—	—	—	22
26. Atrophy, Debility, and Marasmus	3	2	—	—	5	3	3	—	—	11
27. Other Causes	3	1	1	—	5	—	2	6	—	13
Totals	29	11	6	4	50	11	10	10	6	87

	Live Births Registered.			Nett Deaths Registered.			Infant Death-rates.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
Legitimate ..	607	564	1171	42	39	81	69·2	69·2	69·2
Illegitimate ..	28	34	62	3	3	6	107·1	88·2	96·8
Totals	635	598	1233	45	42	87	70·9	70·2	70·6

REPORT ON THE

Administration of the FACTORY & WORKSHOP ACT, 1901, in connection with

Factories, Workshops, Workplaces, and Homework.

1.—INSPECTION.

Premises. (1)	Number of		
	Inspections. (2)	Written Notices. (3)	Prosecutions. (4)
FACTORIES (Including Factory Laundries and Bakehouses)	127	23	—
WORKSHOPS (Including Workshop Laundries and Bakehouses)	133	14	—
WORKPLACES (Other than Outworkers' Premises)	139	20	—
OUTWORKERS' PREMISES	88	4	—
Totals	487	61	—

2.—DEFECTS FOUND.

Particulars. (1)	Number of Defects.			Number of Prosecutions. (5)
	Found. (2)	Remedied. (3)	Referred to H.M. Inspector. (4)	
*Nuisances under the Public Health Acts :—**				
Want of Cleanliness	11	11	—	—
Want of Ventilation	—	—	—	—
Overcrowding	—	—	—	—
Want of Drainage of Floors	—	—	—	—
Other Nuisances	10	10	—	—
Sanitary Accommodation — insufficient	—	—	—	—
Sanitary Accommodation — unsuitable or defective	1	1	—	—
Sanitary Accommodation — not separate for sexes	2	2	—	—
Offences under the Factory and Workshop Acts :—				
Illegal occupation of underground bakehouse (s. 101)	—	—	—	—
Breach of special sanitary requirements for bakehouses (ss. 97 to 100)	37	36	—	—
Other Offences (Excluding offences relating to outwork which are included in Part 3 of this Report)	—	—	—	—
Totals	61	60	—	—

*Including those specified in sections 2, 3, 7, and 8 of the Factory and Workshop Act, 1901, as remediable under the Public Health Acts.

3.—HOMEWORK.

NATURE OF WORK. (1)	OUTWORKERS' LISTS, SECTION 107.									OUTWORK IN UNWHOLESOME PREMISES, SECTION 108.			OUTWORK IN INFECTED PREMISES, SECTIONS 109, 110.		
	Lists received from Employers.						Notices served on Occupiers as to keeping or sending lists. (8)	Prosecutions.							
	Sending twice in a year.			Sending once in the year.				Failing to keep or permit inspection of lists. (9)	Failing to send lists. (10)	Instances. (11)	Notices served. (12)	Prosecutions. (13)	Instances. (14)	Orders made (S. 110). (15)	Prosecutions. (Sections 109, 110). (16)
	Lists. (2)	Outworkers. Contractors. (3)	Outworkers. Workmen. (4)	Lists. (5)	Outworkers. Contractors. (6)	Outworkers. Workmen. (7)									
WEARING APPAREL :— (1) Making, etc.	4	2	6	4	2	20	—	—	—	4	4	—	—	—	—

There are no Outworkers in any of the other trades usually shewn in the above Table.
Figures given in Cols. 11 and 12 refer to premises requiring cleansing and whitewashing.

4.—REGISTERED WORKSHOPS.

Workshops on the Register (S. 131) at the end of the year. (1)	Number. (2)
Number of Workshops (including Bakehouses)	212
Number of Outworkers' Premises on Register	58
TOTAL Number of Workshops on Register	270

5.— OTHER MATTERS.

Class. (1)	Number. (2)
MATTERS NOTIFIED TO H.M. INSPECTOR OF FACTORIES :—	
Failure to affix abstract of Factory and Workshop Act (s. 133)	1
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (s. 5) — Notified by H.M. Inspector	3
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (s. 5) — Reports (of action taken) sent to H.M. Inspector	2
Other	—
Underground Bakehouses (s. 101) in use at the end of the year	1